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FORMATION OF TRIBAL COMMUNITIES : INTEGRATED RESEARCH IN THE MIDDLE EUPHRATES, SYRIA

SUPERVISING TEAM OF THE RESEARCH PROJECT FORMATION OF TRIBAL COMMUNITIES IN THE BISHRI MOUNTAINS, MIDDLE EUPHRATES
(GRANT-IN-AID FOR SCIENTIFIC RESEARCH ON PRIORITY AREA (2005–2009), THE MINISTRY OF EDUCATION, CULTURE, SPORTS, SCIENCE AND TECHNOLOGY, JAPAN)

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CONTENTS

Supervising Team of the Research Project Formation of Tribal
Communities in the Bishri Mountains, Middle Euphrates

PREFACE

This special issue of al-Rāfidān is the collection of papers read at the International Symposium entitled "Formation of Tribal Communities: Integrated Research in the Middle Euphrates, Syria".

The symposium was held in Tokyo at the Sunshine-City Bunka-Kaikan on 21st to 23rd of November, 2009.

Five topic sections constituted the symposium. Section 1 was "Integrated Research in the Bishri Region, the Middle Euphrates" and Section 2 was "Bronze Age Sites of Syria". Section 3 was "History of Tribal Communities in Syria: Citizens and Nomads Viewed from Archaeological Sites", Section 4 was "History of Tribal Communities in Syria: Citizens and Nomads Viewed from Philological Evidences" and Section 5 was "Comprehensive Discussion".

In Section 1, the members of the Research Project Formation of Tribal Communities in the Bishri Mountains, Middle Euphrates presented the papers on the results of the surveys and sondage in the Bishri region. The papers included the results produced by the teams of archaeology, geology, ethno-archaeology, zooarchaeology, physical anthropology and cultural anthropology.

In Section 2, Bronze Age sites in Syria were introduced with discussion on problems with their chronology, city-planing and social changes.

In Section 3, papers were read from viewpoints of archaeological sites to discuss the history of tribal communities in Syria, with references to citizens and nomads.

In Section 4, presentations were focused on the history of tribal communities in Syria from viewpoints of philological evidences, also with references to citizens and nomads.

And in Section 5, several problems were discussed by the symposium participants with references to the presentations in Sections 1 to 4.

It is not for me here to review and comment on all of the papers read at the symposium. However, the wealth of the contributers to the symposium and the nature of their presentations are in themselves a witness to prove that the symposium topic was widely accepted by the symposium participants as an important subject to be clarified thereafter.

Three years ago, the supervising team of the Research Project Formation of Tribal Communities in the Bishri Mountains, Middle Euphrates started to prepare the plan of this symposium, in the hope that we newcomers in the Bronze Age history of the Middle Euphrates could obtain valuable information to widen and deepen our scientific knowledge.

As we had expected, the symposium was very successful with full of important information and practical suggestions by the predecessor scholars, highly experienced in the research of the Bronze Age history of the Middle Euphrates.

In this special issue of al-Rāfidān, the papers read at the four sections of the symposium are printed in four parts.

I am undoubtedly convinced that the papers to follow in this special issue attest affluent knowledge which the symposium participants have accumulated through long-lasting studies and research.

On behalf of the symposium organizing committee members, I express our gratitudes to all of the symposium participants who cooperated with us toward the success of the symposium.

Katsuhiko Ohnuma
December 10, 2009

Welcome party by the symposium participants on November 22, 2009

International Symposium

Formation of Tribal Communities
— Integrated Research in the Middle Euphrates, Syria —

Date: 21- 23, November, 2009
Place: Grand Hall, 7th Floor of Sunshine-City Bunka-Kaikan, 3-1-4 Higashi-Ikebukuro, Toshima-Ku, Tokyo, Japan
Organizing committee: Supervising team (Katsuhiko Ohnuma, Sumio Fujii, Yoshihiro Nishiaki, Akira Tsuneki, Saeko Miyashita and Hiroyuki Sato) of the Research Project Formation of Tribal Communities in the Bishri Mountains, Middle Euphrates (Grant-in-Aid for Scientific Research on Priority Area (2005-2009), the Ministry of Education, Culture, Sports, Science and Technology, Japan)
Subsidizing organization: The Japan Foundation

1st Day: November 21 (Saturday)

Morning

9:00-10:00 Registration

Chairperson: Katsuhiko Ohnuma

10:05-10:25 "Syria-Japan Cultural Cooperation: Past, Present and Future" Riad Nassan Agha (Minister of Culture, Syria)

10:30-11:00 “Archaological Works in Syria Today” Bassam Jamous (Director General, Directorate General of Antiquities and Museums, Syria)
11:00-11:10 *Break*

Section 1 【Integrated Research in the Bishri Region, the Middle Euphrates】

Chairperson: Yoshihiro Nishiaki

11:10-11:40 “Integrated Research in the Bishri Region” Katsuhiko Ohnuma (Professor, Kokushikan University, Japan) and Anas Al-Khabour (Directorate General of Antiquities and Museums, Syria)
11:40-12:10 “Geological and Chronological Study in the Bishri Region” Mitsuo Hoshino (Professor *emeritus*, Nagoya University, Japan) *et al*.
12:10-13:10 *Lunch*

Afternoon

13:10-13:40 “Social Complexity and Organization in Paleolithic of Eurasia” Hiroyuki Sato (Professor, University of Tokyo, Japan)
13:40-14:10 “Sondage at the Site of Tell Ghanem Al-Ali” Atsunori Hasegawa (Ph.D. Student, University of Tsukuba, Japan)
14:10-14:25 *Break*

Chairperson: Saeko Miyashita

14:25-14:55 “Archaeological Surveys of Bronze Age and Earlier Settlements around Tell Ghanem al-Ali” Yoshihiro Nishiaki (Professor, University of Tokyo, Japan)
14:55-15:25 “Surveys and Sondage at the Grave Complexes near the Site of Tell Ghanem al-‘Ali” Hirotoshi Numoto (Professor, Kokushikan University, Japan) and Shogo Kume (Research Fellow, Kokushikan University, Japan)
15:25-15:40 *Break*
15:40-16:10 “Archaeological Investigations of Bronze Age Cairn Fields on the Northwestern Flank of Mt. Bishri” Sumio Fujii (Professor, Kanazawa University, Japan) and Takuro Adachi (Middle Eastern Culture Center, Japan)
16:10-16:40 “Ethno-Archaeological Research on the Modern Cemeteries of Ghanem al-Ali Village” Akira Tsuneki (Professor, University of Tsukuba, Japan)
16:40-16:55 *Break*

Chairperson: Sumio Fujii

16:55-17:25 “Zooarchaeology and Ethnoarchaeobotany at Tell Ghanem Al-Ali” Hitomi Hongo (Associate Professor, Graduate University for Advanced Studies, Japan)
17:25-17:55 “Human Remains from the Bronze Age Sites in Bishri Region” Yoshihiko Nakano (Associate professor, Osaka University, Japan) and Hidemi Ishida (Professor, University of Shiga Prefecture, Japan)

2nd Day: November 22 (Sunday)

Morning

Chairperson: Akira Tsuneki

10:00-10:30 “Preliminary Anthropological Survey in the Villages in the Area around Tell Ghanem al-Ali and Wadi al-Rahum” Masayuki Akahori (Professor, Sophia University, Japan)

Section 2 【Bronze Age Sites of Syria】

10:30-11:00 “The Early Bronze Age Chronology based on 14C Ages of Charcoal Remains from Tell Ghanem al-Ali” Toshio Nakamura (Professor, Nagoya University, Japan)
11:00-11:15 *Break*
11:15-11:45 “Urban Planning in Syria during the Second Urban Revolution (Mid-third Millennium BC)” Michel Al-Maqdissi (Director of Excavations and Research, Directorate General of Antiquities and Museums, Syria)
11:45-12:15 “Bronze Age Sites around Al-Raqqa” Ahmad Sultan (Directorate General of Antiquities and Museums, Syria)
12:15-13:15 *Lunch*

Afternoon

Chairperson: Katsuhiko Ohnuma

13:15-13:45 "Tracing Tribal Implications among the Bronze Age Tomb Types in the Region of Jebel Bishri in Syria" Minna Lönnqvist (Adj. Professor, Universities of Helsinki and Oulu, Finland)

13:45-14:15 "Abrupt Climate and Social Change 4.2-3.9 kaBP at the Riparian and Karst Aquifer Refugia of Syria" Harvey Weiss (Professor, Yale University, U.S.A.)

14:15-14:30 *Break*

Section 3 【History of Tribal Communities in Syria: Citizens and Nomads Viewed from Archaeological Sites】

Chairperson: Hiroyuki Sato

14:30-15:00 "Urban Elements in Early Bronze Age Settlements of the Middle Euphrates" Elisabeth N. Cooper (Associate Professor, University of British Columbia, Canada)

15:00-15:30 "Social Structures and Interaction at Tall Bazi and the Middle Euphrates" Berthold Einwag (Institut fur Vorderasiatische Archaologie der Ludwig-Maximilians-Universitat, Germany)

15:30-15:45 *Break*

15:45-16:15 "Tribal and State: The Changement of Settlements and Settlement Pattern in Uppermesopotamia during the 3rd and 2nd Millenium B.C.: A Re-Evaluation" Jan-Waalke Meyer (Professor, Goethe-University, Frankfurt, Germany)

18:00-20:00 *Welcome Party* Greeting speech: Jean-Marie Durand

3rd Day: November 23 (Monday)

Morning

Section 4 【History of Tribal Communities in Syria: Citizens and Nomads Viewed from Philological Evidences】

Chairperson: Shigeo Yamada

10:00-10:30 "Rod and Ring": Insignias of Foreign Rule in the Ur III - OB Periods" Kazuya Maekawa (Professor, Kokushikan University, Japan)

10:30-11:00 "Nomads and Farmers in the Orbit of Mari Kingdom in the 18th Century (B.C.E.) Syria: A Few Observations on *Merhûm*-officials and their Roles" Ichiro Nakata (Professor *Emeritus*, Chuo University, Japan)

11:00-11:15 *Break*

11:15-11:45 "The Desert Routes across the Djebel Bishri and the Sutean Nomads according to the Mari Archives" Dominique Charpin (Professor, Sorbonne University, France)

11:45-12:45 *Lunch*

Afternoon

Chairperson: Kazuya Maekawa

12:45-13:15 "Amorite Societies along the Lower Habur according to the Tell Taban Tablets" Shigeo Yamada (Professor, University of Tsukuba, Japan)

13:15-13:45 "Between Djebel Bishri and Euphrates River: Nomads and Settled People" Jean-Marie Durand (Professor, Collège de France, France)

13:45-14:00 *Break*

Section 5 【Comprehensive Discussion】

14:00-16:00 Chairpersons: Katsuhiko Ohnuma and Michel Al-Maqdissi

16:00 Closing

PART I

INTEGRATED RESEARCH IN THE BISHRI REGION, THE MIDDLE EUPHRATES

INTEGRATED RESEARCH IN THE BISHRI REGION

Katsuhiko OHNUMA* and Anas AL-KHABOUR**

Introduction

In February of 2007, the Syria-Japan Archaeological Joint Research in the Bishri Region started the field works in the region of Ar-Raqqa (Fig. 1). Since then, twelve times of the joint works in the field were carried out until November of 2009 as follows.

The first season of field works: February to March, 2007.
The second season of field works: May, 2007.
The third season of field works: August, 2007.
The fourth season of field works: November to December, 2007.
The fifth season of field works: March to April, 2008.
The sixth season of field works: April to June, 2008.
The seventh season of field works: October to December, 2008.
The eighth season of field works: February to March, 2009.
The ninth season of field works: April to June, 2009.
The tenth season of field works: July to September, 2009.
The eleventh season of field works: October, 2009.
The twelfth season of field works: November, 2009.

Composed of eighteen research teams listed below, specialized in natural and cultural sciences, this multi-diciplinary joint research aims to clarify, through harmonized cooperation in the Bishri region south of Ar-Raqqa, changes of natural environment, settlement patterns, subsistence patterns, architectural styles, artistic styles and social relationship, thereby clarifying how ancient pastoral nomadic tribes contributed to the formation of urban societies along the Middle Euphrates, North-East Syria.

1) Supervising Team "Archaeological Research in West Asia based on Integrated Research Methods" (Director: Katsuhiko Ohnuma).
2) Research Team "Relationship between the Behavioral Evolution and the Process of Sedentalisation during the Palaeolithic Period in West Asia" (Director: Hiroyuki Sato).
3) Research Team "Expansion Process of Food Production Economy and Formation of Community in the Arid Area of West Asia" (Director: Yoshihiro Nishiaki).
4) Research Team "A Comparative Study on the Burial Patterns of the Pastoral Nomadic Tribes" (Director: Sumio Fujii).
5) Research Team "A Study of the Process of Urbanization in West Asia" (Director: Akira Tsuneki).
6) Research Team "Integrated Research on the Assyrian Civilization in Northern Mesopotamia" (Director: Hirotoshi Numoto).
7) Research Team "Establishment and Development of the Civilization of Sumerian Writing System" (Director: Kazuya Maekawa).
8) Research Team "Development of City-States and the Tribes in West Asia" (Director: Akio

* Professor, Kokushikan University, Japan
** Directorate General of Antiquities and Museums, Syria

Fig. 1 The region of Ar-Raqqa where the Syria-Japan Archaeological Joint Mission is conducting surveys and sondage.

Tsukimoto).

9) Research Team "Environmental History of the Middle Euphrates based on Environmental Geology, Environmental Chemistry and C14 Dating" (Director: Mitsuo Hoshino).
10) Research Team "Biological Features of the Ancient Inhabitants of the Middle Euphrates and its Peripheral Region" (Director: Hidemi Ishida).
11) Research Team "Zoological and Botanical Archaeology in the Prehistoric to the City-State Societies of West Asia" (Director: Hitomi Hongo).
12) Research Team "A Study on the Styles and the Genealogy of Masonry Techniques in Ancient West Asian Architecture" (Director: Yasuyoshi Okada).
13) Research Team "Basic Structure and Re-arrangement of the Bishri Mountains Tribal Culture in the Ancient Oasis City, Palmyra" (Director: Saeko Miyashita).
14) Research Team "Developing Data-base of Archaeological Sites of West Asia: An Investigation through the Analysis of Satellite Images" (Director: Ken Matsumoto).
15) Research Team "An Archaeological Study on the Nomadic Tribal Communities in Northern Eurasia: A Comparative Study" (Director: Shu Takahama).
16) Research Team "A Study of the Process of Urbanization in the Steppical Border of Syria in the Third and Second Millennia B.C." (Director: Michel Al-Maqdissi).
17) Research Team "A Study of the Bronze Age Pottery Obtained by the Syria-Japan Archaeological Joint Research in the Region of Ar-Raqqa" (Director: Michel Al-Maqdissi).
18) Research Team "New Perspectives of Anthropology and History towards Arab Tribal Systems" (Director: Masayuki Akahori).

Research up to the twelfth season of field work

As mentioned in the previous section, we have carried out integrated research in the Bishri region and in Japan to clarify changes of natural environment and of cultural aspects of history along the Middle Euphrates, North-East Syria.

Research in Japan has also yielded fruitful results, such as clarification of subsistence patterns along the Middle Euphrates in the Bronze Age through the study of the Mari document.

In this paper, however, we describe briefly how the series of surveys and sondage have been carried out up to present. The details of the series of results are to follow this paper by the authors who are in charge of the field works.

In the first season, we carried out surveys of archaeological sites and *bir*s (wells) in the research region, confirming that there is a bias in the dates of the sites on the Euphrates plateau between the towns of Mansura and Ghanem al-Ali. We also confirmed that most of the sites in the western part of the plateau are dated to the Roman, Byzantine and Islamic periods, while in the eastern part only a few sites are distributed, several of which are dated to the Early Bronze Age.

On the basis of these archaeological surveys, we chose Tell Ghanem al-Ali as the candidate for future excavations (Fig. 2), and made its overall plan in the second season (Fig. 3). Thus, trench excavations were started at this site in the third season, and they were continued in the fourth, seventh, ninth and tenth seasons.

In the fifth to ninth and eleventh seasons, we carried out surveys at the Early Bronze Age hilltop tombs (Fig. 4) near the village of Ghanem al-Ali, in order to shed light on the funerary aspect of the EBA settlement of Tell Ghanem al-Ali.

Survey of cairns along the northern edge of the Mount Bishri (Fig. 5) was started in the second season, and sondage at Rujum Hedaja near Bir Rahub was carried out in the fifth to tenth seasons, with a view to explore the pastoral background of the EBA society in the middle Euphrates river basin.

Fig. 2 Tell Ghanem al-Ali seen from the east.

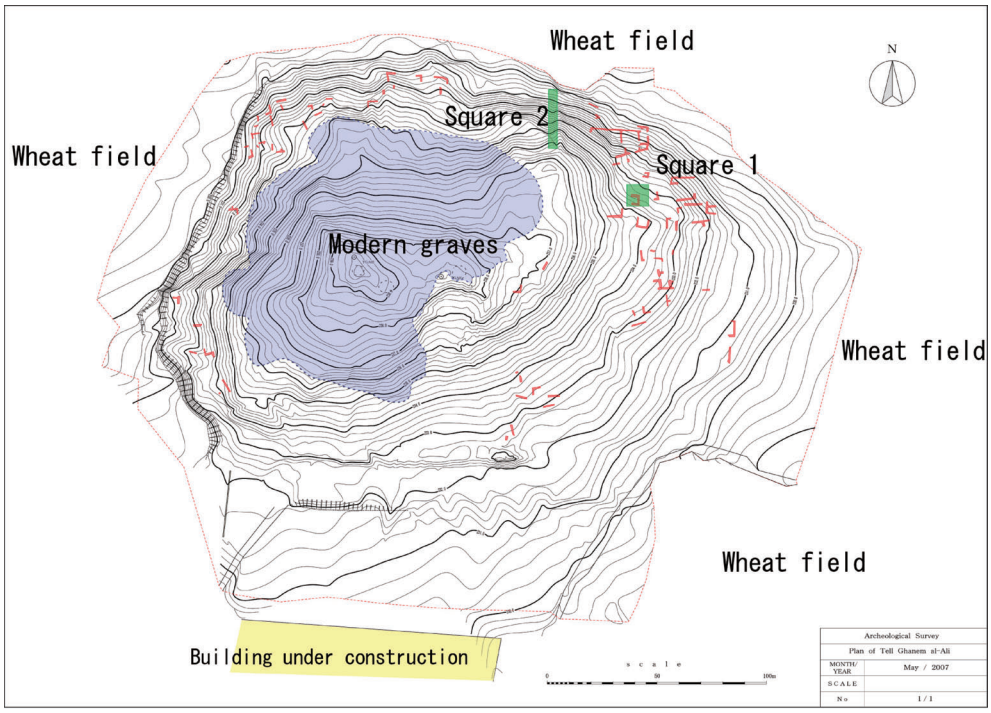

Fig. 3 Overall plan of Tell Ghanem al-Ali.

Fig. 4 Early Bronze Age hilltop tombs near the village of Ghanem al-Ali.

In the third, fifth and ninth seasons, we carried out intensive surveys of archaeological sites to clarify the EBA land-use patterns around Tell Ghanem al-Ali, in order to gain further records of population history in this region since earlier times. And, Palaeolithic survey was carried out in the research region in the third season.

In the first, third to sixth, tenth and twelfth seasons, our geolo-geographical team joined the

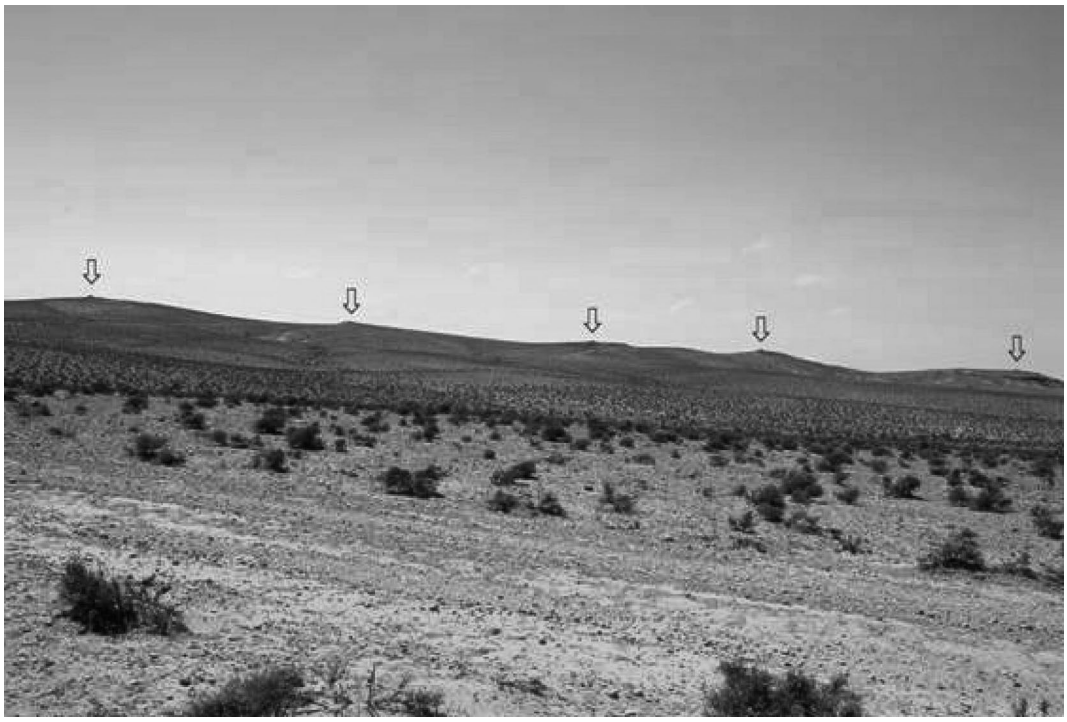

Fig. 5 Series of cairns along the northern edge of the Mount Bishri.

field works to obtain information on changes of natural environment.

Botanical research on the specimens obtained from the surveys and excavations was carried out in the third, fourth, sixth, seventh and ninth seasons, and faunal research was carried out in the third and fifth seasons.

As to the human bones unearthed from the sondage, morphological studies were undertaken in the seventh and tenth seasons.

In a viewpoint that cultural anthroplogical research is important and indispensable to know the relationship between nomads and agriculturists in the past, our cultural anthropology team researched at the villages of Ghanem al-Ali and Wadi al-Rahum in the seventh and eighth seasons.

Also, we carried out research on the history of the village of Ghanem al-Ali in the fourth and ninth seasons, with ethno-archaeological survey of their modern graves.

Future research

It is generally agreed that in the Middle Euphrates region of central Syria sedentary villages appeared in the Neolithic period. These villages were based on dry-farming by means of rain-water and on domestication of animals.

It is said that these villages were diminished and/or dispersed in later period due to the increase of village scale and population, lack of food and sudden advent of dry weather (Forest 1996).

It is highly likely that such diminishment and/or dispersal of sedentary villages led to the separation of villages into two population groups with different patterns of subsistence, that is, riverside agriculturists on the one hand and pastoral nomads in the steppic desert on the other, the latter relying their subsitence on trade of dairy products with agriculturis in the riverside and cities.

Features of the objects obtained during the series of surveys and sondage we have carried out so far demonstrate that the site of Tell Ghanem al-Ali and the grave complexes near the site of Tell Ghanem Al-Ali are dated within the Early Bronze Age, whereas the cairn graves along the north-

western flank of Mt. Bishri are dated to the Middle Bronze Age.

This leads us to suppose that the research to continue will prove a possibility that the Amorite communities supposedly to have formed in the Neolithic or the older period in the region repeated separation and re-unification as agriculturists and pastoral nomads through history as suggested below.

1) Separation into two population groups with different ways of subsistence within the Amorite communities in the period before the Bronze Age. One of the groups were agriculturists along the Euphrates and another were pastoral nomads in the steppic desert.
2) Re-unification in the Early Bronze Age of the two population groups to lead the two subsistence ways at the same time along the Euphrates.
3) Separation into two population groups in the Middle Bronze Age: agriculturists along the Euphrates and pastoral nomads in the steppic desert.
4) Re-unification of the two population groups to lead the two subsitence ways at the same time along the Euphrates.

Acknowledgements

Dr. Bassam Jamous, Director General of the Syrian Directorate General of Antiquities and Musems, and Dr. Michel Al Maqdissi, Director of Archaeological Excavations and Research at the Syrian Directorate General of Antiquities and Musems, kindly understand this joint research and are constantly cooperating with us towards its success. We cordially express our gratitudes to them for their heart-warming cooperation.

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GEOLOGICAL AND CHRONOLOGICAL STUDY IN THE BISHRI REGION

Mitsuo HOSHINO[1], Tsuyoshi TANAKA[2], Toshio NAKAMURA[3],
Hidekazu YOSHIDA[4], Takeshi SAITO[5], Kazuhiro TSUKADA[6],
Yusuke KATSURADA[7], Yoshiyuki AOKI[8] and Suguru OHO[8]

Introduction

The Syria–Japan multidisciplinary archaeological joint research project titled 'Formation of Tribal Communities in the Bishri Region, Middle Euphrates' began in spring 2007. Since then, our geological team has conducted detailed field survey in and around the Tell Ghanem al-Ali excavation site using geological, geochemical, geochronological and remote-sensing methods to understand the environmental changes in the area since prehistoric times.

In this paper, we discuss Quaternary volcanic activity, river-terrace formation, palynological, mineralogical, geochemical and radio-stratigraphic characteristics of various sediments and remotely sensed information in the area (Fig. 1). The ^{14}C chronology of the Tell Ghanem al-Ali excavation site is reported separately in detail.

Basement Geology

The northeastern part of the Bishri Mountains consists of Neogene sedimentary rocks, Quaternary volcanic rocks and Quaternary sediments of various origins (Fig. 1). The Neogene sedimentary rocks, the basement of the area, are well exposed on the northern cliffs of the Bishri Mountains. They consist of gypsum rocks with fine-grained acidic tuff intercalations (Fig. 2). The gypsum rocks are mostly crystalline and massive. The tuff layers, 3–10 cm thick, are usually well bedded and include abundant poorly preserved fossils such as foraminifera and bivalves. Their bedding plane is surprisingly horizontal around Ghanem al-Ali; however, that around Hawijat Shunan is folded with a vertical axial plane. Although by a previous study (Ministry of Industry, S.A.R., 1964) the sedimentary rocks were assigned to the middle Miocene, estimation of the actual age of their deposition from fossils is almost impossible. In the central part of the Bishri Mountains, however, Palaeogene sedimentary rocks predominate and include archaeologically interesting asphalt deposits and flint rocks of high quality at Bir Sbai (Fig. 1).

Volcanic Activity

In Quaternary times, volcanic eruptions took place in the area; the resulting lava flow and pyroclastics covered the basement rocks in four places: the Al Treb, Zenobia-Halabye, Mankhar Gharbi and Mankhar Sharqi volcanoes (Fig. 1). The following ages were obtained from K-Ar dating performed on three rock specimens: 2.72 ± 0.09 Ma B.P. for Al Treb, 2.60 ± 0.08 Ma B.P. for Zenobia-Halabye

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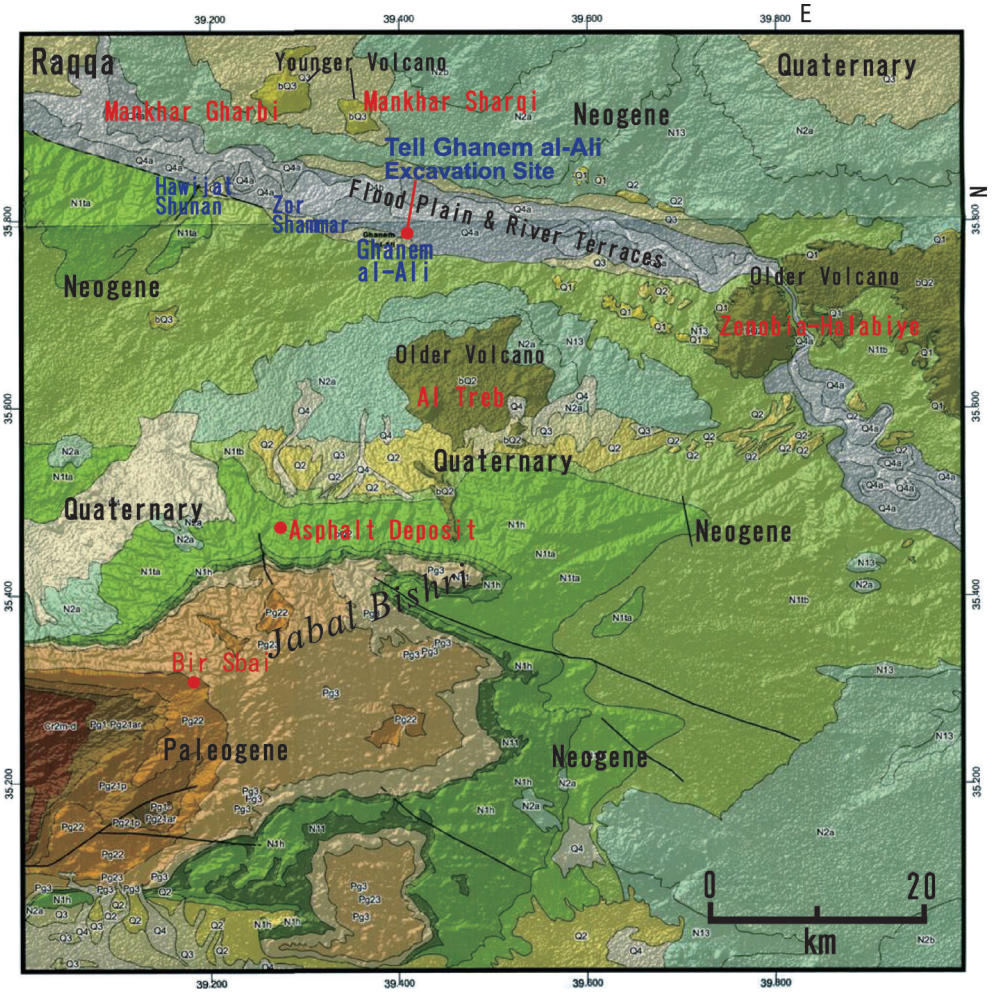
4) Associate Professor, Nagoya University Museum, Japan
5) Associate Professor, Faculty of Science and Technology, Meijo University, Japan
6) Assistant Professor, Nagoya University Museum, Japan
7) Center for Student Counseling, Nagoya University, Japan
8) Ph. D. Student, Graduate School of Environmental Studies, Nagoya University, Japan



KEY Quaternary (Q_1-Q_4): gravel, sand and silt. Neogene (N_1, N_2): conglomerate, sandstone, siltstone, tuff, marl, limestone, gypsum stone and asphalt. Paleogene (Pg_1-Pg_3): sandstone, siltstone, mudstone, tuff, marl, flint and limestone. Older Basalt (βQ_2-). Younger Basalt (βQ_3).

Fig. 1. Geological map of Syria 1-37-XXII, 1:200,000 (Ministry of Industry, S.A.R., 1964) is overlaid on SRTM-3 DEM (Data processing: Katsurada, 2007).

and 1.38 ± 0.08 Ma B.P. for Mankhar Gharbi (Table 1). In addition, X-ray fluorescence analyses were performed on eleven rock specimens. It is noteworthy that the rocks from the older volcanoes were identified as basanite of the per-alkaline variety, whereas those of the younger volcano were identified as foidite of the hyper-alkaline variety (Table 1). Foidite, terrestrially very rare in occurrence, characteristically contains phenocrystic nepheline crystals in which groundmass crystals of augite and opaque minerals are embedded poikilitically. Lease et al. (2008) consider that the chemical and isotopic compositions of the Euphrates volcanic rocks reflect strong affinity to the hotspot basalt group.

River Terrace Formation

Five levels of river terrace, I, II, III, IV and V in descending order, and a floodplain in the narrow sense (Iseya, 1998) of the Euphrates are recognisable on the basis of available topographic maps and field observation. These terraces are well developed from Zor Shammar to the Wadi el-Kharar area. Tell Ghanem al-Ali is located on the lowermost terrace, V, which has an elevation around

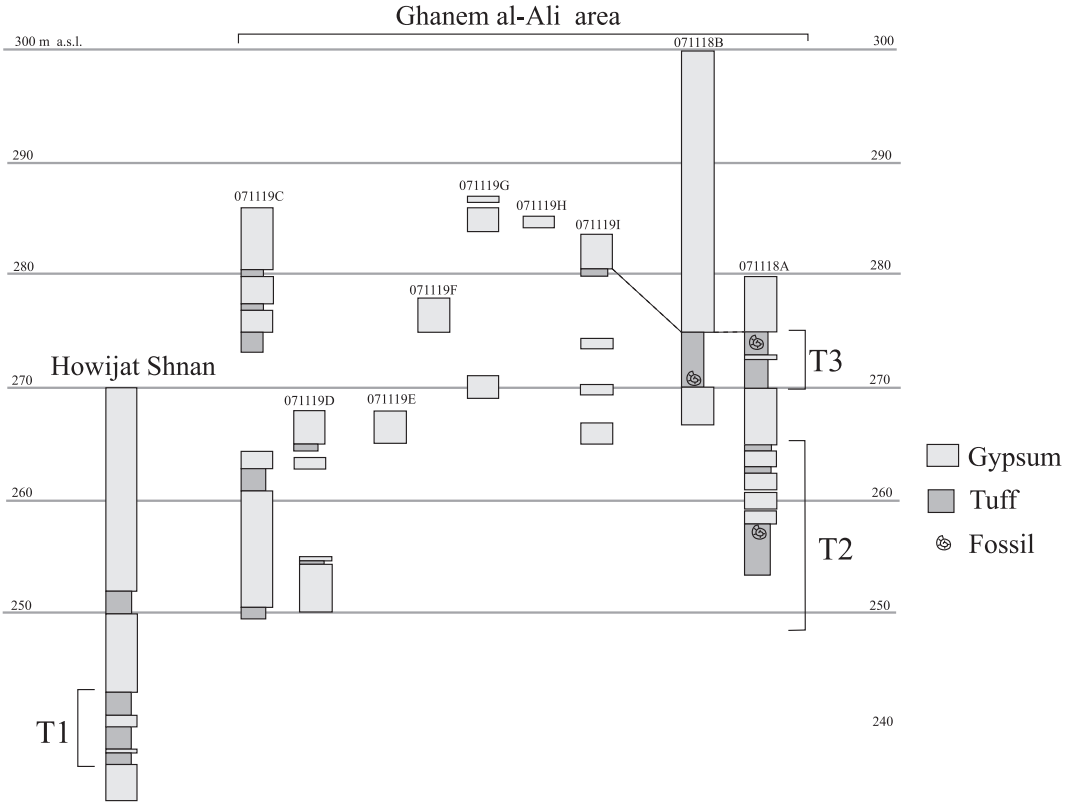


Fig. 2. Columnar sections of Neogene sedimentary rocks, northern Bishri.

Table 1. Major element chemistry, K-Ar radiometric age and Sr isotopic ratio of the volcanic rocks.

Sample No.	B-1	B-2	B-3	B-4	B-5	B-6	B-7	B-8	B-9	B-10	B-11
Rock name	Porous basanite lava	Massive basanite lava	Massive basanite lava	Massive basanite lava	Porous basanite lava	Massive basanite lava	Massive foidite lava	Porous foidite lava	Foidite scoria	Porous basanite lava	Porous foidite lava
Locality	Al Treb	Al Treb	Al Treb	Zenobia-Halabiye	Zenobia-Halabiye	Zenobia-Halabiye	Mankhar Gharbi	Mankhar Gharbi	Mankhar Gharbi	Mankhar Gharbi	Mankhar Sharqi
SiO_2 (wt. %)	43.41	43.32	43.45	42.90	41.44	42.62	39.40	40.02	39.33	41.58	39.46
TiO_2	3.17	3.12	3.13	3.52	3.45	3.18	3.18	3.06	3.28	2.92	3.53
Al_2O_3	11.71	11.93	12.07	11.79	11.58	11.71	9.80	10.13	10.13	10.93	10.63
Fe_2O_3*	13.60	14.34	14.31	14.59	14.36	15.11	13.09	13.85	14.17	13.59	15.13
MnO	0.17	0.17	0.17	0.18	0.17	0.18	0.17	0.18	0.19	0.18	0.18
MgO	10.56	10.86	10.60	10.69	9.72	10.05	14.76	13.67	13.88	13.12	11.78
CaO	10.31	10.14	10.23	9.77	12.28	10.17	10.99	11.56	11.19	10.86	10.90
Na_2O	2.83	3.36	3.46	3.17	3.05	3.51	4.09	3.25	3.93	3.82	4.98
K_2O	1.44	1.14	1.18	1.30	1.17	1.04	1.46	1.07	1.77	1.45	1.39
P_2O_5	0.53	0.56	0.58	0.58	0.55	0.72	0.99	1.00	1.03	0.78	1.07
Total	97.73	98.94	99.18	98.49	97.77	98.29	97.93	97.79	98.90	99.23	99.05
K-Ar age(Ma)		2.72±0.09		2.60±0.08			1.38±0.08				
$^{87}Sr/^{86}Sr \pm 2\sigma m$	0.70579±3	0.70348±2	0.70348±2	0.70387±2	0.70401±3	0.70380±3	0.70314±2	0.70333±2	0.70311±2	0.70322±2	0.70313±2

* Total Fe as Fe_2O_3

230 m a.s.l. and is 1–2 m higher than the floodplain comprising modern channels, oxbow lakes, banks and marshes (Fig. 3).

The sediments of terrace V could be observed at several localities, especially along the Euphrates. They chiefly consist of sand and occasionally of gravel and sandy mud. The sand and sandy mud include trace fossils of reed roots in places, indicating that the sediments were deposited

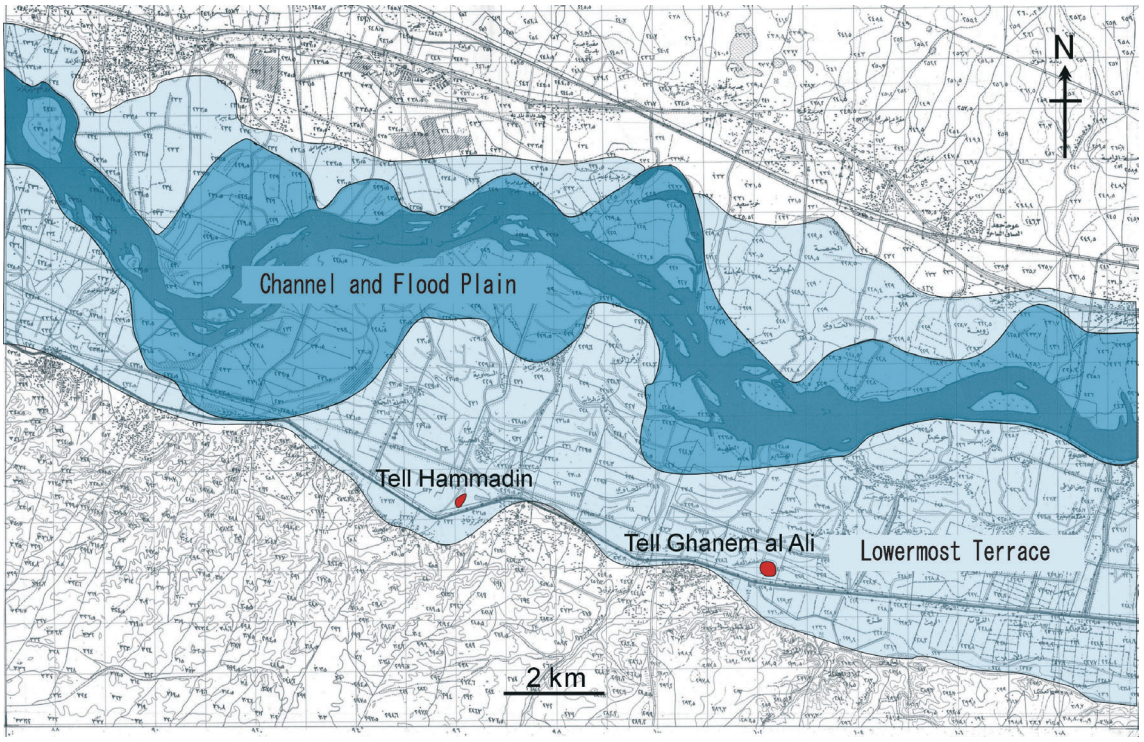


Fig. 3. Topographic relationship between flood plain and the lowermost terrace near the excavation sites.

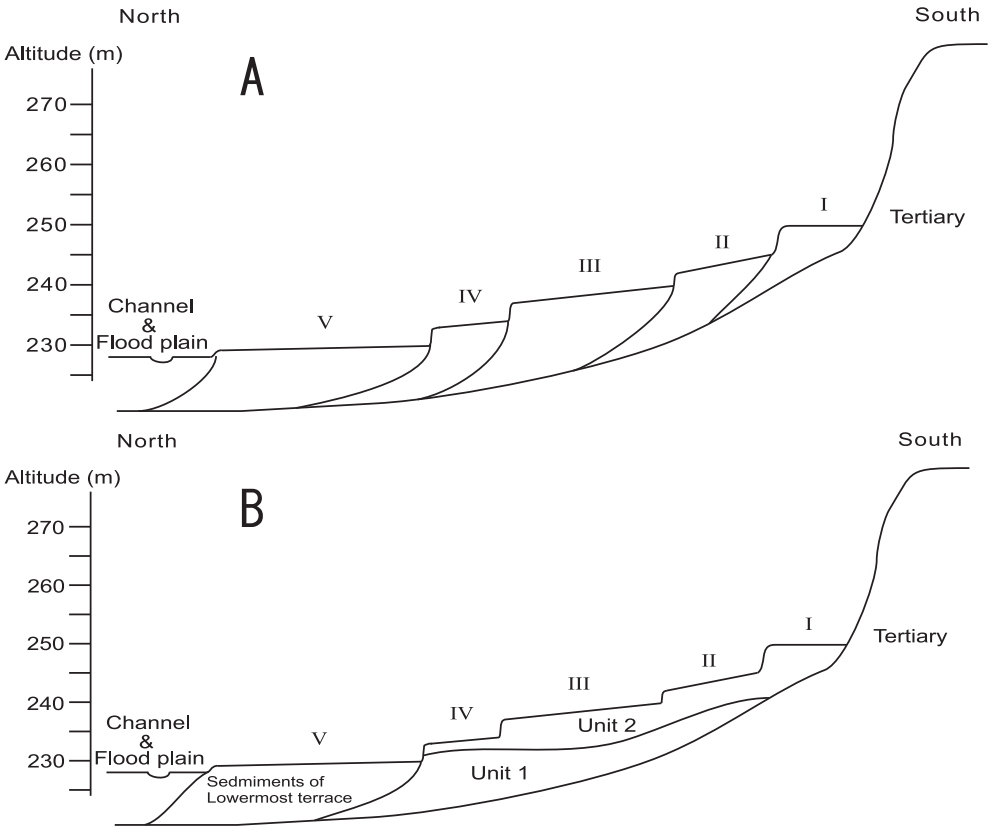


Fig. 4. Two models of terrace formation in the study area. A: depositional terrace model, B: erosion terrace model.

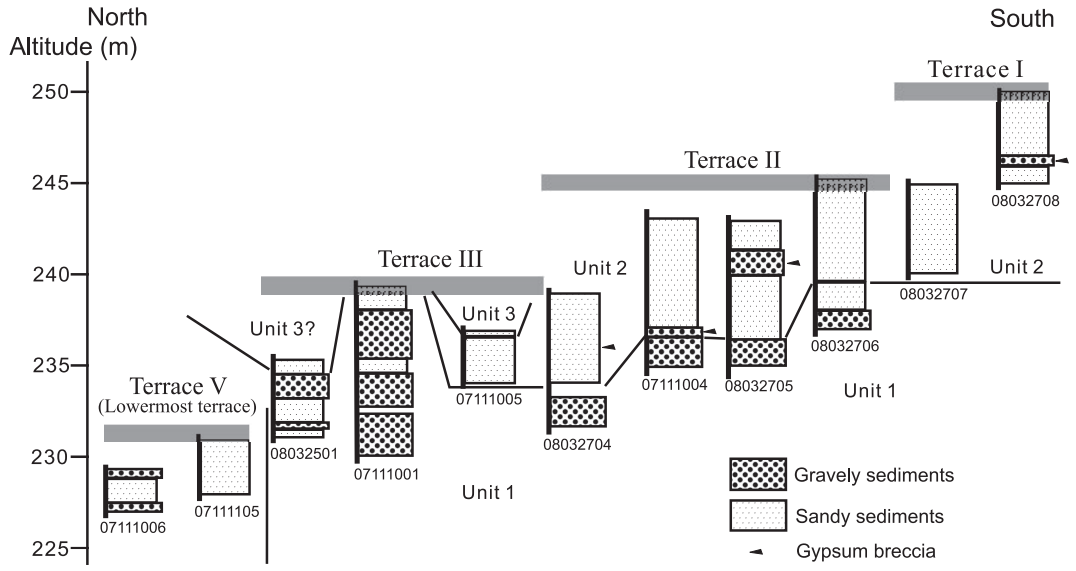


Fig. 5. Columnar sections observed in the terrace sediments.

in a reed marsh. The formation age of terrace V is inferred from ^{14}C dating (Nakamura et al., 2009). The ^{14}C ages of three charcoal specimens collected from terrace V sediments are 899 ± 26, 949 ± 27 and 927 ± 25 y. B.P. The ^{14}C ages of two other specimens of carbonaceous fraction from the fluvial muddy fine sand are 4494 ± 37 and 3245 ± 29 y. B.P. These age data indicate the formation of terrace V during ca. 4500–900 y. B.P. The terrace V sediments were also observed on the site of a factory under construction, which is adjacent to the tell (Saito and Tsukada, 2008). The sediments consist of sand with intercalations of two fluvial gravel layers. The lowest part of the sediments belonging to the tell were also observable and include some artefacts, several charcoal layers and many charcoal fragments. Seven ^{14}C age data ranging from 4001 ± 30 to 4093 ± 36 y. B.P. were obtained. These age data suggest that the settlement of Tell Ghanem al-Ali began during the early stage of terrace V formation.

The elevations of the higher terraces, I, II, III and IV are 250 m, 242–245 m, 237–240 m and 233–234 m a.s.l., respectively. However, we found very few fluvial sediments in terraces I, II, III and IV, which suggests that they are basically erosional in origin (Figs. 4, 5). The terrace surfaces are generally covered with young sandy sediments, presumably of aeolian origin.

Stratigraphy of Tell Ghanem al-Ali

We conducted a stratigraphic survey in Tell Ghanem al-Ali to confirm the boundary between artificial tell sediments and natural basal sediments. Two sites were selected for the survey. Site 1 is at the western foot of the tell and Site 2 is the section, south of the tell, where the factory is under construction (Fig. 6).

Site 1

We excavated a 1 × 1 m pit 2.1 m deep at the western foot of Tell Ghanem al-Ali. The sediments in the pit are composed of muddy sand and include many artefacts, such as earthenware and stone instruments. The upper part of the pit walls is well stratified by bricks and sand layers. On the other hand, the lower part is massive and includes many charcoal spots and artefacts.

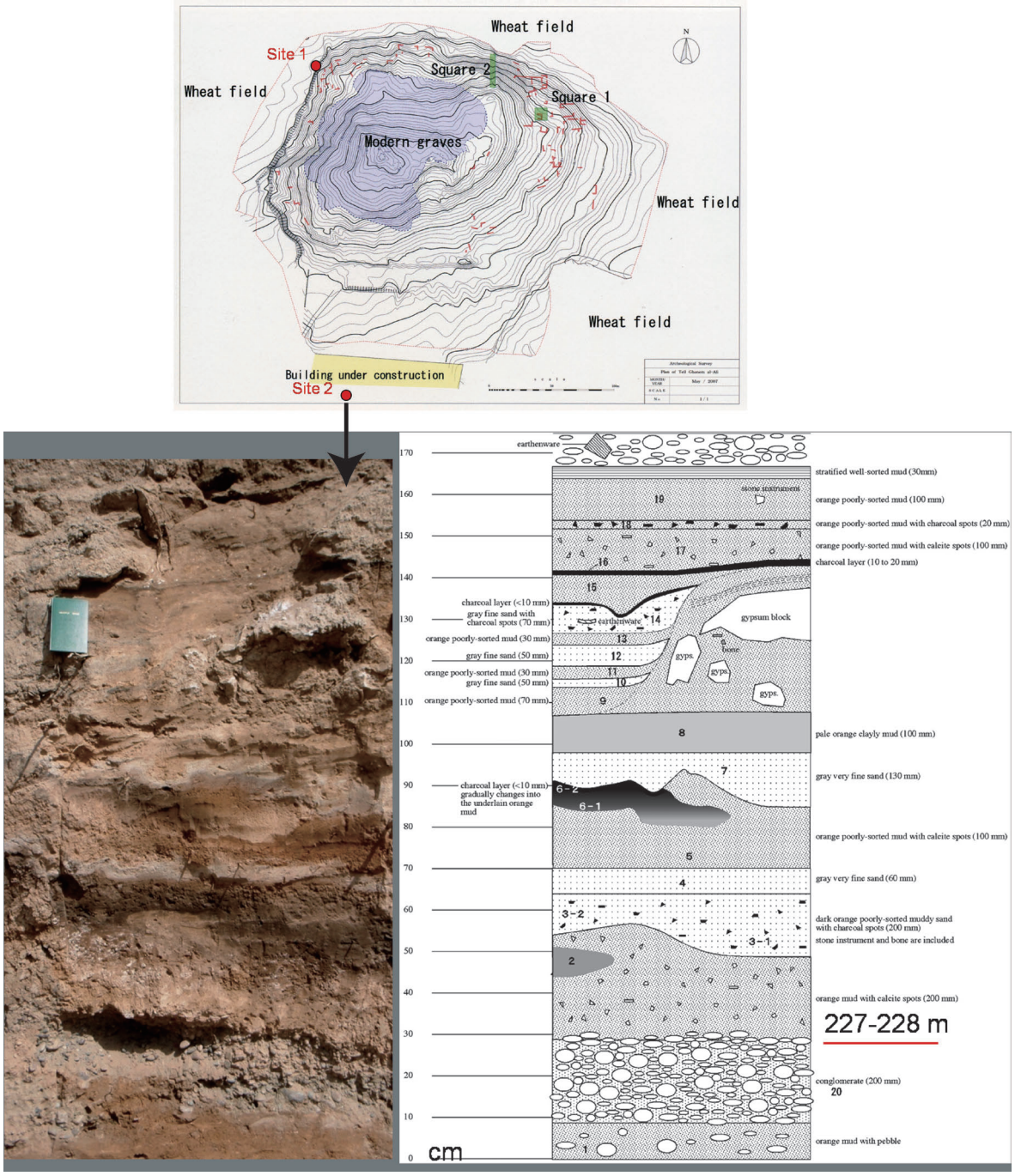


Fig. 6. Photograph and Columnar section of the Site 2 in the tell.

Site 2

We found a good section showing the basal sediments of Tell Ghanem al-Ali at the factory construction site, south of the tell. The sediments mainly consist of ill-sorted muddy sand with charcoal fragments. The profile is shown in Fig. 6. The upper part of the section contains several charcoal layers, suggesting intensive human activity in and around Tell Ghanem al-Ali. On the other hand, a fluvial gravel layer is intercalated in the lowermost part of the section. This gravel layer indicates the basement horizon of the tell.

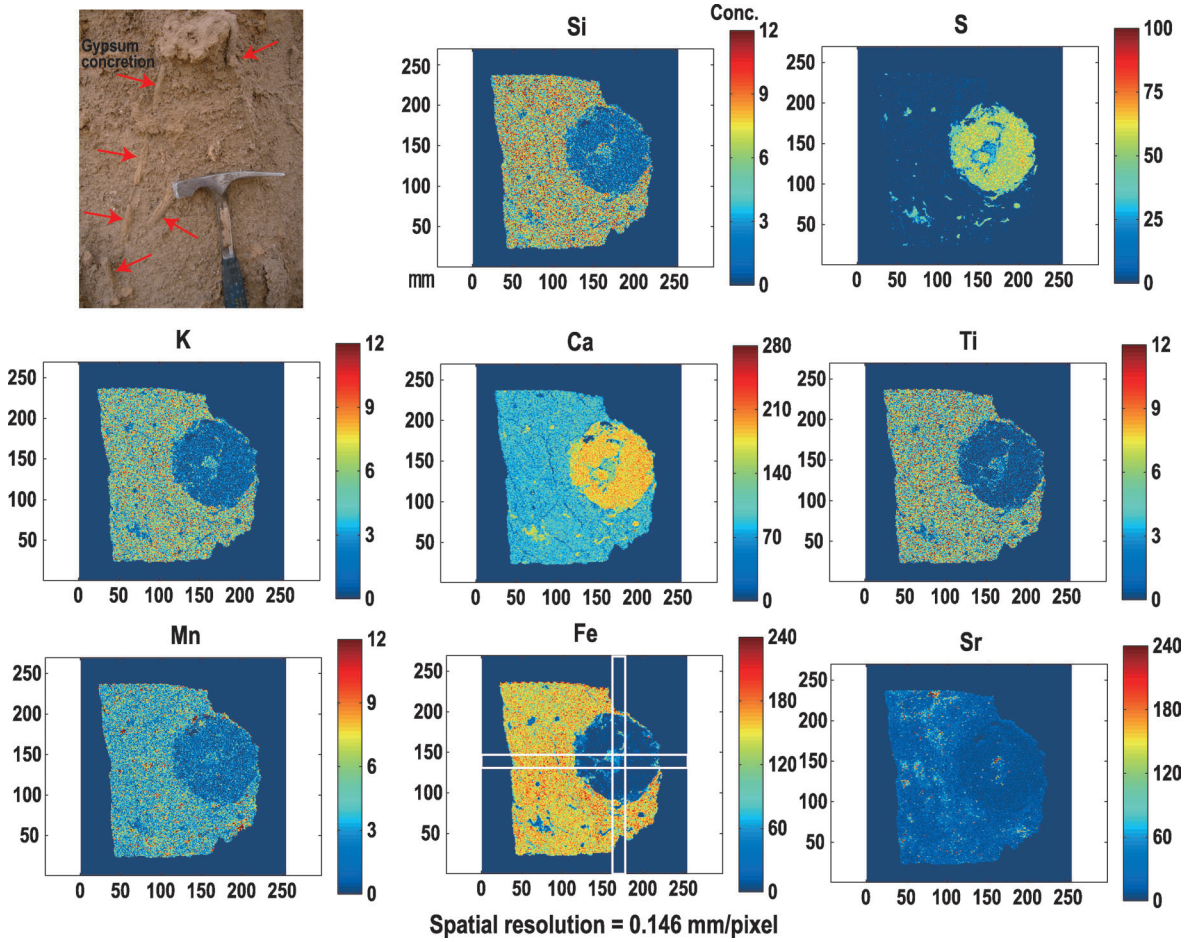


Fig. 7. Chemical mapping of the gypsum concretions.

Formation Process of Gypsum Concretions

The Euphrates floodplain includes modern channels, oxbow lakes, banks and marshes. These sedimentary phases of terraces are mainly unconsolidated dry silty to fine sand materials with poorly sorted gravels derived from the Bishri Mountains. The study of sedimentary features therefore reveals past environmental conditions in the study area. We found many types of gypsum concretions in the soft terrace sediments. The size of the concretions is about 1–2 cm in diameter and several centimetres in length (Fig. 7). Occasionally, one that is several tens of cm in size grew vertically into the sedimentary layer and crossed the bedding plane. This occurrence suggests that such concretions formed after the deposition of terrace sediments, described as follows.

First, the sediments were deposited about several Ka ago. After deposition, the sediments still had a certain amount of pore-water that presumably contained high Ca content. This situation is estimated by the present river water composition and also by the dissolution of gypsum provided by the basement rocks. During the compaction of continuing terrace deposits, pore-water was isolated and concentrated beyond the solubility limit of Ca. On the other hand, the sediments also contain a sulfate component from organic matter. Due to the diagenetic alteration such a geochemical setting formed; finally hydrous calcium sulphate ($CaSO_4 \cdot 2H_2O$) was precipitated and gypsum concretions were formed. The shape of the concretions is quite unique, i.e. similar to the root plaque of plants growing in the floodplain. Figure 7 shows the chemical mapping of the gypsum concretions. The study of the formation process of the iron-oxide concretion ‘Takashi-kozou’ is underway in Japan (Yoshida and Matsuoka, 2004; Yoshida et al., 2008).

Radio-Stratigraphy for Tell Ghanem al-Ali

An important aspect regarding the geological setting of the tell is in verifying whether Tell Ghanem al-Ali was built on a remnant edge of the old terrace or on the lowest Euphrates terrace. Stratigraphic survey of the area, however, is very difficult, because the terrace sediments do not contain any remarkable key beds like tuff. Thus, we performed on-site radioactivity measurements of gamma rays of ^{40}K, ^{214}Bi and ^{208}Tl using an InSpector 1000 portable gamma-ray spectrometer from CANBERRA Co., equipped with an IPRON-3 3x3-inch NaI detector. The measurements are actually performed for 1461 keV gamma rays of ^{40}K, 1764 keV gamma rays of ^{214}Bi and 2614 keV gamma rays of ^{208}Tl. ^{214}Bi and ^{208}Tl are the daughter nuclides appearing in the decay series of ^{238}U to ^{206}Pb and ^{232}Th to ^{208}Pb, respectively. Subsequently, we obtained the relative elemental abundances of potassium, uranium and thorium by these measurements.

Thirty points covering Squares 1 and 2 of the excavation sites of the tell were selected. Radioactivity was also measured in the surrounding wheat field and the river terrace along Wadi el-Kharar for comparison. The detector was held 1 m high and the radioactivity within a 3-m radius of the detector can be measured. It takes 600 s to complete the measurement for each measuring point.

Activities for potassium range from 1000 to 4200 counts (Fig. 8). These are common activities in natural environments in Syria as well as in Japan. Activities for potassium at the tell, more than 3000 counts, are higher than those at the wheat field and Wadi el-Kharar, which were mostly below

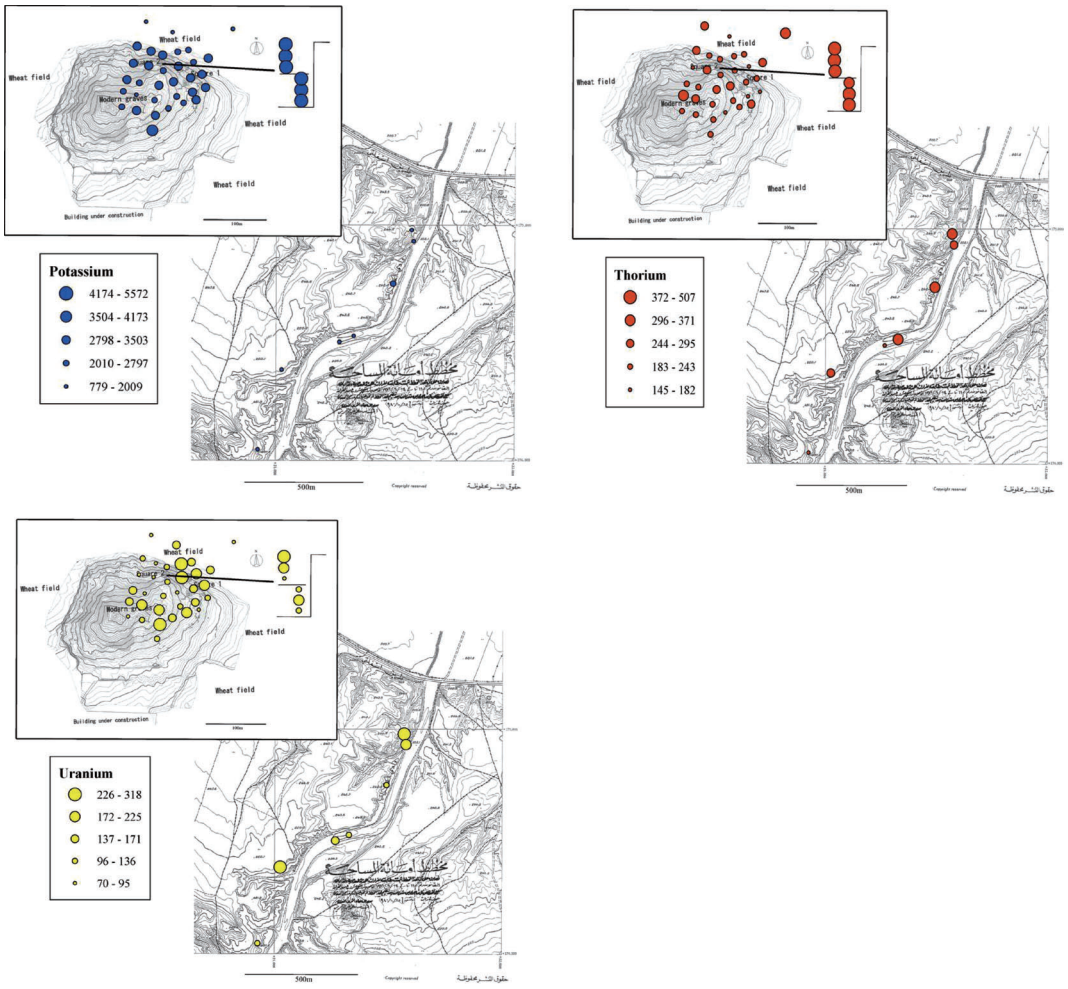


Fig. 8. Relative elemental abundances of K, U and Th based on on-site radioactivity measurements.

3000 counts. There is no significant difference between the tell and other places in uranium and thorium activity. Potassium is mostly contained in K-feldspar and mica minerals, and uranium and thorium are contained in accessory minerals such as zircon and monazite. The K-feldspar and mica minerals tend to weather easily, though the zircon and monazite resist weathering. K-feldspar is sparse in the river sediment because it is consumed (fragmented and dissolved) during transportation. On the other hand, zircon increases in river sediments because of its resistance to weathering. Thus, we conclude that the sediments in the wheat field and the river terrace along Wadi el-Kharar exhibit the characteristics of river sediment, whereas the tell sediments do not. A large part of the tell sediments must be soils transported from non-river terrain, probably from the hills behind the Ghanem al-Ali village.

Viewing the Geo-Environment using Remotely and Closely Sensed Information

Poor vegetation coverage provides good conditions for land surface surveys in the arid and semi-arid lands of the Middle East, where plenty of archaeological sites are located. To abstract geological settings, six locations were selected out of three remotely sensed images obtained by the Advanced Spaceborne Thermal Emission and Reflection Radiometer (ASTER) in August 2004, May 2005 and July 2005.

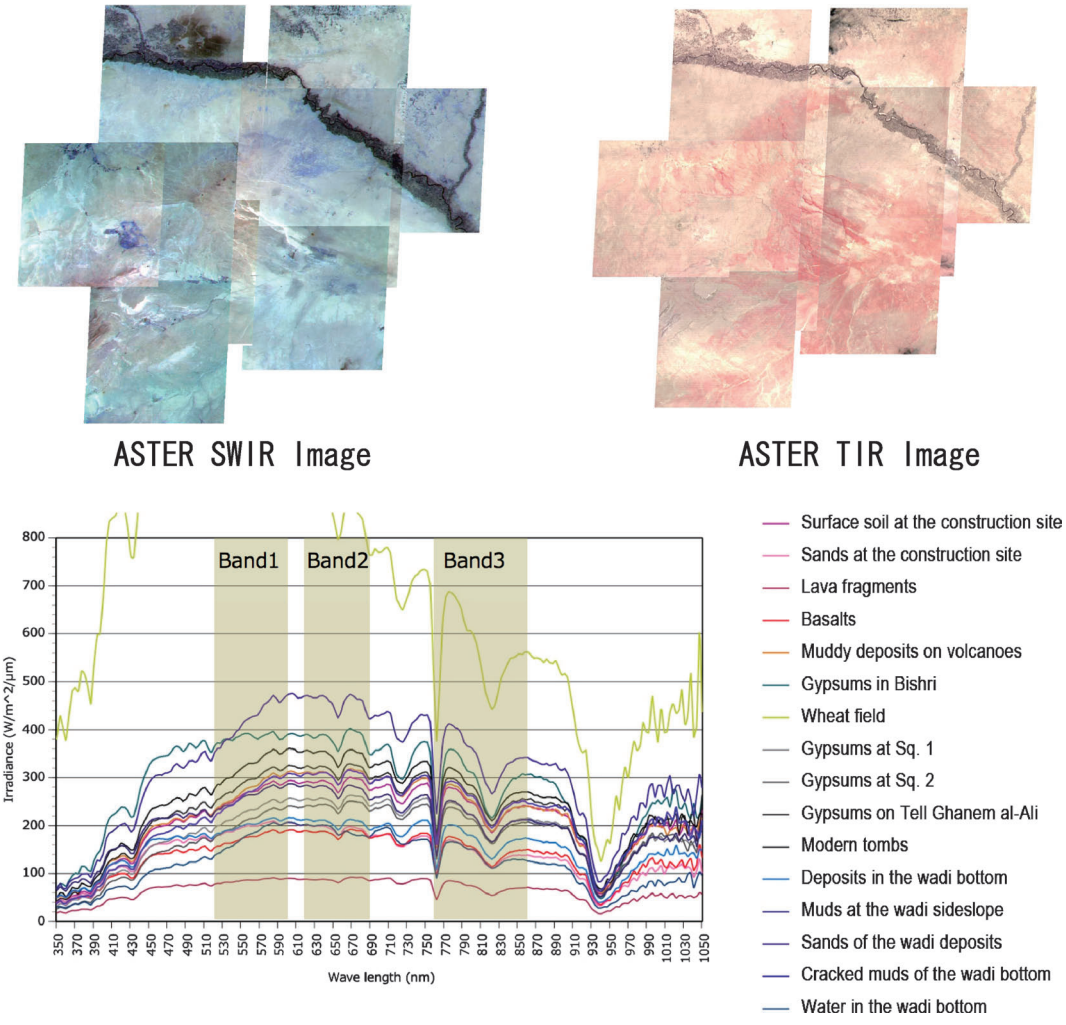


Fig. 9. ASTER SWIR and TIR images and spectra of the reflectance at the study sites: bands 1, 2 and 3 of ASTER VNIR.

Multispectral processing was then performed, referring to earlier studies such as Rowan and Mars (2003) and Kavak (2005). Field investigations to confirm the physical conditions were conducted in November 2007 and May 2008. Geological settings at the outcrops were recorded, including rock sampling. Miocene gypsum deposits were indicated with SWIR (R, G, B = bands 6, 5, 4) and TIR (R, G, B = bands 11, 10, 12). Minerals shown in different colours in SWIR (R, G, B = 7, 8, 9) were not identified. Asphalt and/or Eocene volcanic tuff may, however, be indicated in addition to gypsum and limestone in the Bishri mountainous region. Basalts were indicated in every set of band zones.

Furthermore, spectral reflection was measured with a spectroradiometer (MS-720) for visual and near-infrared wavelengths (350–1050 nm) in May 2008 (Fig. 9). Significant differences sufficient for identification of the rocks were not found in the reflectance patterns in this wavelength range. The strength of the reflection, however, varied as grain size changed. The physical condition of the recent sediments along Wadi el-Kharar appeared as differences in strength. Scanty vegetation did not affect the reflection, but the wet areas along the river Euphrates showed typical vegetation patterns.

The wider geological setting based on ASTER data was indicated as mentioned above, especially in the SWIR and TIR bands. The physical condition of recent deposits, such as grain size are believed to appear in visual and near-infrared wavelengths. These remote- and close-sensing data, combined with further micro-topographical information, may provide us knowledge about the geo-environmental resources surrounding Tell Ghanem al-Ali.

Concluding Remarks

Although our research is in progress and it is still too early to discuss the environmental changes in the Bishri Region, geological process that took place since prehistoric times is getting clear.

(1) The younger volcanic eruption in the area took place 1.38 Ma ago, that time corresponds to the Lower Palaeolithic Period.
(2) Five levels of river terrace, I, II, III, IV and V in descending order, are recognisable and the formation of terrace V would be during ca. 4500–900 y. B.P.
(3) The settlement of Tell Ghanem al-Ali probably began during the early stage of terrace V formation.
(4) The tell sediments differ in radioactivity from those in the wheat field and in the river terraces. A large part of the tell sediments must be soils transported from non-river terrain.

We expect that the pollen analyses on the core samples collected from the oxbow lakes in August 2009 provide significant information about the past environmental changes in the area.

Acknowledgements

Dr. Bassam Jamous, Director General of the Syrian Directorate General of Antiquities and Museums, and Dr. Michel Al Maqdissi, Director of Archaeological Excavations and Research at the Syrian Directorate General of Antiquities and Museums, kindly understood this archaeological project and cooperated towards its realization. We express our sincerest gratitude to them for their warm-hearted cooperation. We also thank Drs. Samer Abdel Ghafour and Anas Al-Khabour of the Syrian Directorate General of Antiquities and Museums, and Mr. Muhamed Ahmad Sarhan, Director of Raqqa Museum for their kind help and cooperation. Thanks are also extended to Messrs. Ayham Al-Fahry, Ahmed Sultan, Ibrahem Khalil, Mahmmod Al-Hassan, Mohamad Ali Jajan, Mohamad Ibrahim, Ibrahim Musa and Aed Issa for their kind help in the field. Field and laboratory studies were made possible by the Grant-in-Aid for Scientific Research on Priority Area, Grant No. 17063005 (2005-2009) from the MEXT, Japan, to which we express our deepest gratitude.

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SOCIAL COMPLEXITY AND ORGANIZATION IN PALEOLITHIC OF EURASIA

Hiroyuki SATO*

1. Emergence of segmentary society

Humankind has lived in some groups since they were born. So far, Paleolithic mobile hunter-gatherer societies have been regarded ecologically as egalitarian ones which are composed of bands formed by some nuclear families, but some recent studies have claimed that some of them were kinds of segmentary societies in some cases or aspects (Gamble 1999, Renfrew 2008). Segmentary societies generally mean the state that several regional societies such as clans or tribes stand together, or societies which have complex social structure.

It is usually said that the land occupation (territoriality), importance of (fictitious) kinship ties, share of language, custom, culture, belief, and religion, formation of self-identity and competition with the others in common distinguish the tribal society, a representative type of segmentary society (Renfrew and Bahn 1991). The main purpose of this paper is to show a theoretical try to take a view of the emergence process of tribal societies in Western Asia, while it is difficult to discuss those anthropological characteristics mentioned above from archaeological point of view.

2. Social evolution and social stratification

Theoretical researches of anthropology and archaeology traditionally have considered the evolution of human societies as stages of economical development based on the materialism. The most representative ones of them can be referred to be 'hypothesis of production stages of economical development', which were founded by renowned anthropologists such as E. Tylor or H. Morgan, later developed by the Social Darwinism of H. Spencer, and once completed by F. Engels and K. Marx who were strongly influenced by Morgan's theory. In these theories, the emergence of segmentary society was recognized by several indications such as the storage of surplus products resulted by the development of agriculture, and the emergence of rulers or hierarchies who redistribute those products. The neo-evolutionists, M. Fried (1967), E. Service (1962), and M. Sahlins (1958) considered Neolithic agricultural society as tribal one, and Paleolithic society as egalitarian one which have no social segment.

The neo-evolutionism, which regards the complexity and stratification of social structure as important, has been very influential today also, but it is still difficult to explain the concrete formation process of the tribal society, and which makes the neo-evolutionism no more than a working hypothesis. In recent days, researches attaching importance to aggrandizing behavior for getting prestige, which is observed in many hunter-gatherer societies, have attracted a great deal of attention. According to B. Hayden (Dietler and Hayden 2001) and M. Godelier (Godelier 1986), even at the lower stage of economy like hunting and gathering societies which produce no surpluses, social segmentation can be progressed by aggrandizing behavior that ambitious persons such as elites, 'Big Men', or 'Great Men' actively conduct through cleverly control of competitive prestigious exchange or trade (Tab. 1). From this standpoint of social stratification, 'ritual integration hypothesis' as tentative name, it will become possible to examine theoretically the formation process of segmentary society like Neolithic tribal one. So to speak, shifting our viewpoint from subsistence (production)

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Tab. 1 Major Theories of Social Stratification (modified from Takahashi, 2004)

<table>
<tr><th>M. Frind (1967)</th><th>E. Service (1962)</th><th>I. Goldman (1970)</th><th>M. Sahlins (1958)*</th><th>M. Godelier (1986)</th><th>J.F. Collier (1986)</th><th>B. Hayden (1995)</th><th>M. Yoshioka (1993)</th></tr>
<tr><td>State Society</td><td rowspan="2">State Organization</td><td></td><td></td><td rowspan="3"></td><td rowspan="3"></td><td rowspan="2"></td><td rowspan="2"></td></tr>
<tr><td rowspan="2">Stratified Society</td><td rowspan="2">Stratified Society</td><td>I</td></tr>
<tr><td rowspan="2">Chiefdom Organization</td><td>II A</td><td rowspan="2">(Chiefdom)</td><td rowspan="2">Chiefdom</td></tr>
<tr><td rowspan="3">Ranked Society</td><td>Open Society</td><td>II B</td></tr>
<tr><td rowspan="3">Tribe Organization</td><td rowspan="3">Traditional Society</td><td rowspan="3">III</td><td>Big Man</td><td>Unequal Bridewealth Society</td><td>Entrepreneur Community</td><td>Grade-taking System</td></tr>
<tr><td rowspan="2">Great Man</td><td rowspan="2">Equal Brideservice Society</td><td>Reciprocator Community</td><td rowspan="2">Big Man</td></tr>
<tr><td rowspan="2">Egalitarian Society</td><td rowspan="2"></td><td>Despot Community</td></tr>
<tr><td>Band Organization</td><td></td><td></td><td>Brideservice Society</td><td></td><td></td></tr>
</table>

* Categorized by Islands' productivity and the degree of social stratification (Sahlins 1958: 132)
(e.g. Group I: Hawaiian Islands, Tongan Islands, Society Islands and Samoan Islands and etc.)

to ritual (society) make it possible to analyze the concrete process of emergence of segmentary society in Upper Paleolithic period.

3. Several evidences in Upper Paleolithic period

Paleolithic people were mobile hunter-gatherers. In Europe where comparative study between preceding hominids has progressed, it is revealed that stratified structure of space and land use became complicated rapidly after 40,000–30,000 years ago when modern human had emerged. In the stage of Neanderthals (Middle Paleolithic period), subsistence units of human group had moderate relationship (mainly of matrimony) only with adjacent ones, but the relationship between modern human groups made rapid change and came to be very complicated. In northern and moderate climate zones, reinforcement of alliance between adjacent groups was demanded in that wide foraging strategy mainly including middle to large mammal hunting was adopted. Several analyses of distribution of available lithic raw material, lithic typology, and ornaments have revealed that ranges of subsistence, exchange, marriage, and style were highly stratified and integrated into structuralized landscape at that period (Stringer and Gamble 1993). These phenomena are also recognized in Japan. Based on the study of a lot of archaeological sites, there are many regional industries (societies) extending about 100–200km in the major axis in Upper Paleolithic period in Japanese archipelago (Sato 1992). This arrangement of regional industries was also known in the later period, and moreover, stemmed point industry of final Late Pleistocene (Incipient Jomon) shows difference of style, social *habitus*, between Hokkaido and Honshu (Nagai 2007). It is possible that these phenomena reflect the emergence of stratified social structure as a result of enhancement of highly scheduled behavioral strategies by mobile hunter-gatherers.

Ritual behavior implies similar change. The Mal'ta site, which belongs to Eastern Gravettian and is located in Baikal region of Russian federation, is known for having several burials accompanying ornaments such as carved goods and pendants made from bones and antlers. Similar situations were found at several contemporary sites in Siberia (Derevianko *et al* 1998). Many figurines of the shape of humankind or animals and many ornaments made from bones and antlers were known in the other cultures of Upper Paleolithic period, for example Aurignacian (Conard and Bolus 2002; Münzel 2006). In the Africa where modern human emerged quite earlier than Europe and the other

area, shell beads of 70,000 years ago were recovered from the MSA layer at the Blombos cave in South Africa (d'Errico *et al* 2005). Recently, similar shell beads from the Skhul cave in the Levant were recovered from the older layer than 100,000 years ago (Marian *et al* 2006).

Sungir site near Moscow has a grave where several grave goods such as bone and antler ornaments and straightened spear made from Mammoth tusk were buried. In particular, it is important that two sets of bones recovered from this grave turned out to be those of young children. Based on the ethnological researches on contemporary hunter-gatherers, while the existences of prestigious elites who are excellent hunter are often reported, such prestigious position usually doesn't descend to their children, because they get and keep prestige by their own superior hunting technique. In spite of this, it can be said that personal prestige may have been descendent hereditarily at that period, since Sungir children were already buried reverently (Alexeeva and Bader 2000).

Although these data above is still fragmentary, but it can be said that symbols, items, or devices (cave arts, etc.) that implied the existence of group identity and differentiation among individuals had already emerged.

4. Possibility of 'tribes' in Upper Paleolithic period

As analyzed above, the regional societies that reflect a certain intensification of land use, was formed by mobile hunter-gatherers in the Upper Paleolithic period when modern human emerged. At the same time, rituals, devices, and customs developed in order to avoid competition among adjacent groups and maintain group identity. It should be mentioned that a sign of segmentary society that prepare later tribal society of Neolithic period had already come out in Paleolithic period.

Social segmentation in them, however, is thought to have been not clear and imperfect. It is presumed that such segmentary society was not sedentary tribal one of Neolithic, but Palaeolithic mobile one to the last.

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SONDAGE AT THE SITE OF TELL GHANEM AL-ALI

Atsunori HASEGAWA*

Introduction

In 2007, the Syrian-Japanese Archaeological Joint Research in the Bishri region began the fieldwork. And we have carried out soundings at Tell Ghanem al-Ali six times. The purpose of this paper is to show the latest results of the soundings at Tell Ghanem al-Ali.

Tell Ghanem al-Ali is located 50 km east of the city of Raqqa and 2.5 km south from Euphrates. It is located on the river terrace of Euphrates and it measures about 290 m (west to east) and about 250 m (north to south) and 10 m in height. However, the west and south slopes of tell was artificially flatten in modern time. So, the present size of tell is smaller than that of the original (Fig. 1).

According to a contour map which was made in 1962 by an Italian company, the tell used to have an irregular oval plan with maximum width of about 400 m (west to east) and about 300 m (north to south), reaching about 12 ha. According to this measurement, Tell Ghanem al-Ali was of a middle size among Bronze age sites located along the middle Euphrates (Hasegawa 2008).

The top of the mound is covered with modern graves of local villagers. But we are able to identify that a considerable number of stone lines elsewhere on the tell. Some lines have one or two corners and others form rectangular shape. Some lines in the contour map shows the plans of stone and

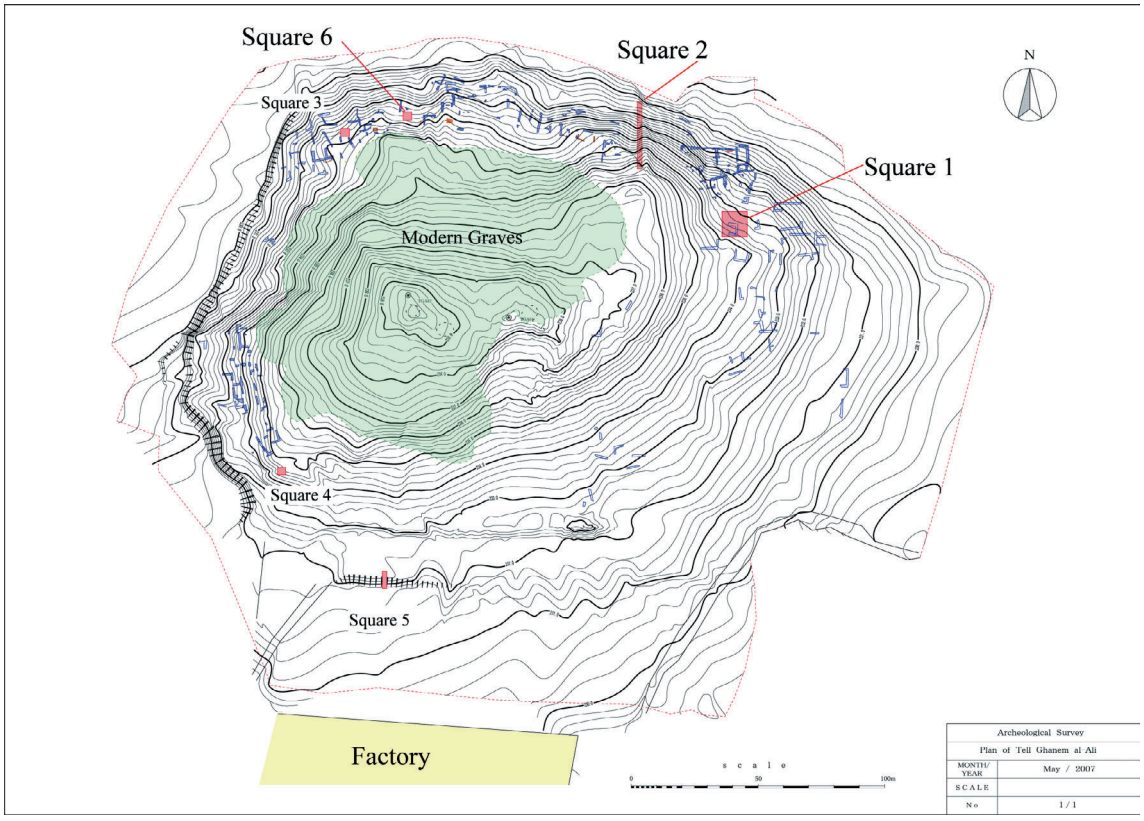

Fig. 1 Contour map of Tell Ghanem al-Ali.

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white lines on the surface.

The objectives of the Sondage

We have carried out soundings at six squares. The main objective of the sondage was two-fold. The first was to investigate the architectures visible on the surface, and to identify the period from which they originate. The second was to confirm the chronological sequence of Tell Ghanem al-Ali.

For the first objective, we selected the east slope of the mound, where many architectural ruins were located. we named it Square 1. It measures 10 by 10 m. For the second objective, we set a step trench on the northern slope of the mound. We call it Square 2. It measures 4 m (east to west) by 27 m (north to south).

Squares 1 and 2 are main research areas of Tell Ghanem al-Ali. In addition to these two squares, we carried out soundings in four small squares. They were named squares 3 to 6. Squares 3 and 6 are located on the north - west part of the mound. Squares 4 and 5 are located on the south part of the mound. The size of these trenches was about 3 by 3 m. In this paper, I will take up the result of main two squares and square 6.

Square1 (Fig. 2)

In Square 1, three main structures were unearthed (Al-Maqdissi and Ohnuma eds. 2008). The first structure was found at the south - west part of Square 1. The second structure was lying at the north of the first one. And third structure was identified at the east of the second one.

Before the first structure was found at south - west part of Square 1, we had already confirmed a white line. Then we encountered walls made of gypsum just below it. The walls run along in the north-south and east-west direction. This wall has at least 6 courses of stones. And it remains

Fig. 2 Structures of Square 1, from the west.

up to 80 cm from the top to the bottom. Inside its room, we found another stone wall which has a shape of “T”. It seems that this room was reconstructed in short time. The second structure is a rectangular room located in the north of the first structure. It is built of tuff walls. A small hearth was found at the north - west corner of the room, being attached to the north wall. The third structure is also rectangular room. Being different from Structures 1 and 2, it is mainly built of mud-brick, orange and brown in color. At least 5 courses of mud-bricks were identified in well-preserved walls. Except for the east wall, the walls have stone foundations.

As the result of the sondage, to sum up the major feature of structures in Square 1, we can point out three features. The first is that some walls show the sign of reuse and reconstruction. But the foundations of these structures were always identified as basic walls running along the north-south and east-west axes. The second, we identified at least 3 patterns of wall constructions. The first type is stone walls. Most walls in square 1 is this type. Second type is the walls which were made of mud-brick and have stone foundations. The last type is made of mud-brick without stone foundations. The third feature is that, in square 1, we did not identified any gypsum-plastered floors. In contrast, we found gypsum-plastered floors in Squares 2.

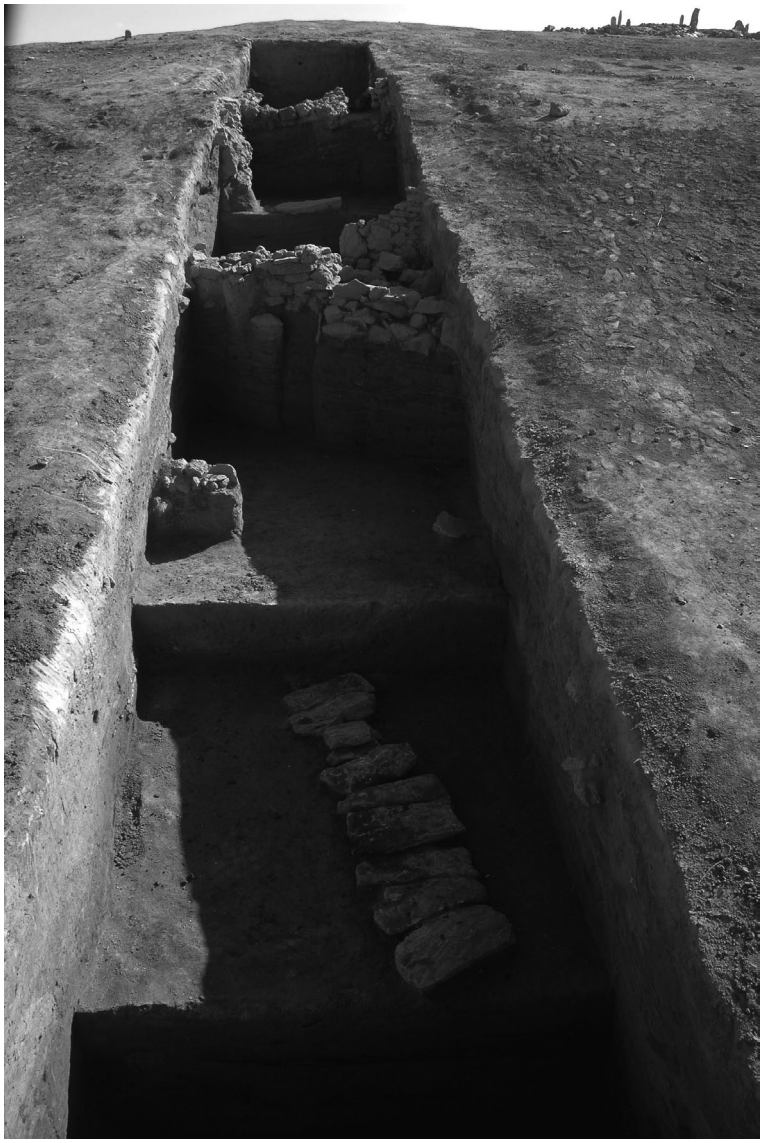

Fig. 3 Square 2, from the north.

Square 2 (Fig. 3)

We set a step trench along the north slope of the mound. In square 2, we have identified 8 building levels before we reached the virgin soil (Al-Maqdissi, and Ohnuma eds. 2008, 2009, Tsuneki and Hasegawa and Sultann 2009).

Building level 1

Building level 1 consists of three parallel stone walls, running in the east-west direction. In the west section of this square, Oven was unearthed. Also, a pit was unearthed on the north edge of the square. The west part of the square was paved with gravels and covered with ash.

Building level 2

Three adjoining rooms were identified (Fig. 4). Their arrangement is in the north-south direction. All of them have an entrance in the west wall. Between a southernmost room and a central one, there is a doorway. In the south of them, another room was identified. One of its wall, running along the east-west axes, is shared by one of the walls that compose the three rooms. It has a gypsum-

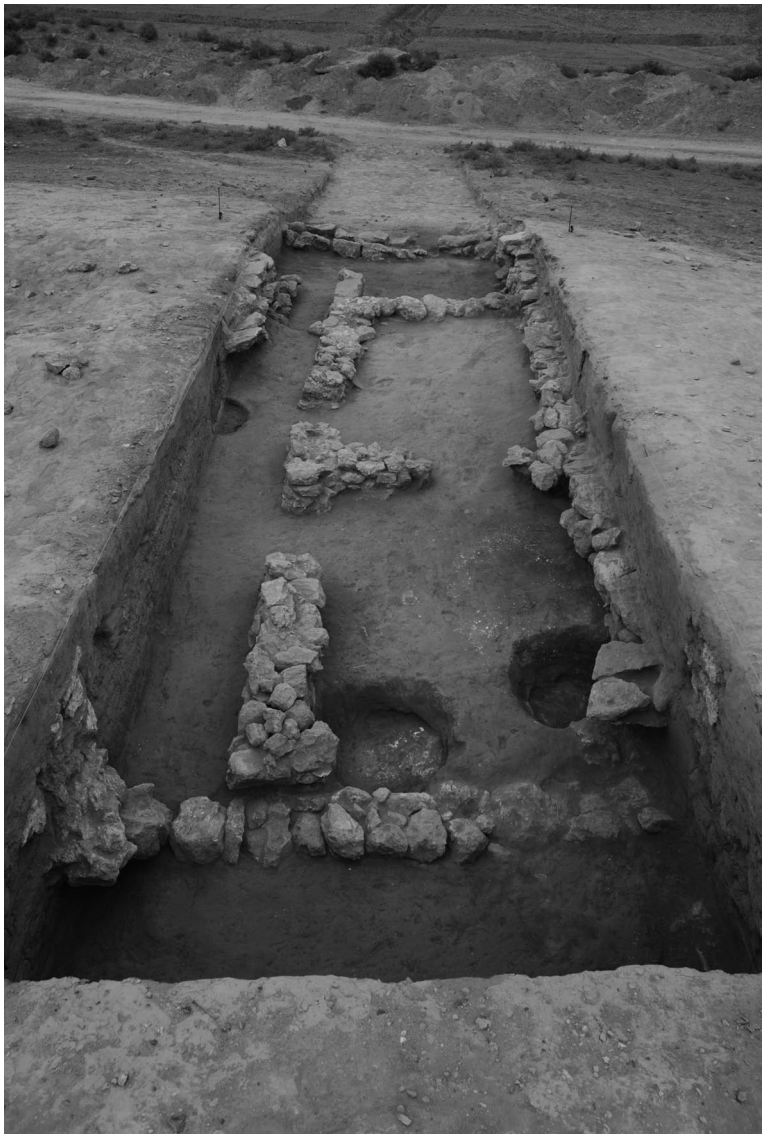

Fig. 4 Building level 2 of Square 2, from the south.

plastered floor, which has a circular depression. We found a oven just below it.

Building level 3

A massive wall was found hidden in the east section of square 2. It was reused when the building level 2 were build. This massive wall continues to the north and remains more than 1 m in height. Large stones were used for parts of this wall.

Building level 4

At the building level 4, we found two structures. One is mud-brick wall. The other is a thick massive stone wall (Fig. 5). The mud-brick wall, running north to south, is hidden in the west section. The massive wall consists of two raws of walls. They extend from the north-west to the south-east and run in parallel. The north wall is thin but very high. It remains about 1.8 m in height. On the other hand, the south wall is very thick. It is about 2 m in width and 70 cm in height. This massive wall was constructed with stones larger than those used for dwellings at the upper level. And I would like to emphasize that it is built in the different directions from all the walls at the upper level. It is possible that they were a part of a town wall.

Fig. 5 Building level 4 of Square 2, from the west.

Building level 5

The preservation of buildings at level 5 is not so good. One stone wall was identified extending east to west but in fragmental condition. A nearly complete cooking pot was unearthed in the south of the stone wall.

Building level 6

In contrast to the south part of square 2, the central part of square 2 has very thick topsoil layers. We identified layers of disturbed soil up to approximately 1.3 m below the ground at the highest point on the hill top. Under these layers, we found a stone foundation built of large stones. On this stone foundation, some mud-bricks were identified. The orientation of the stone foundation is

mainly along the northwest to southeast axes.

Building level 7 (Fig. 6)
About 40 cm below the level 6, three rooms were identified. The walls are constructed with mud-Bricks and extend along the north - west to south-east axis. The walls were constructed by piling mud-bricks, measuring about 30 × 60 cm. Each wall is about 60 cm wide and runs north - west to south - east. In contrast to the walls of level 6, they did not have stone bases. That is to say, mud-bricks were laid directly on the ground.

Fig. 6 Building level 7 of Square 2, from the south.

Building level 8
About 40 cm below the level 7, another three rooms were identified. The walls stretched north to south. In a similar way to the building walls of the level 7, the walls at this level were constructed using mud-bricks. The size of mud-bricks is also similar. However, the arrangement of mud-bricks is different. In the level 7, each mud-brick was placed side by side along a long axis, making the width of the wall 60 cm. By contrast, in the level 8, they were placed along a short axis and the walls are 30 cm wide.

Below level 8
Below the building level 8 is an about 40 cm thick layer of ash, including a lot of charcoals. Below the ash layer, we encountered the layer of brown soil. This layer includes a few fragments of potsherds and charcoals but no structures. And we did not find any structures. The next layer consists of darker soil, which is wet and homogeneous and silt-like. No potsherds and no other remains were included. It is certain that this is a virgin soil at Tell Ghanem al-Ali. It is 3.4 m deep from the surface at the north end of Square 2.

Chronology of Tell Ghanem al-Ali

Based on our analysis of the features of these structures, it is possible to classify them into three phases. The third phase consists of the dwellings constructed of stones. They are rectangular and the orientation of their walls is mainly along a north-south axis. In some rooms, we found the evidence of plastered floors. Some ovens were unearthed. In the second phase, one thick wall built of large stones was identified. The axis of the wall is from the southeast to the northwest. Both the size

Fig. 7 Pottery found from Phase 1, Square 2.

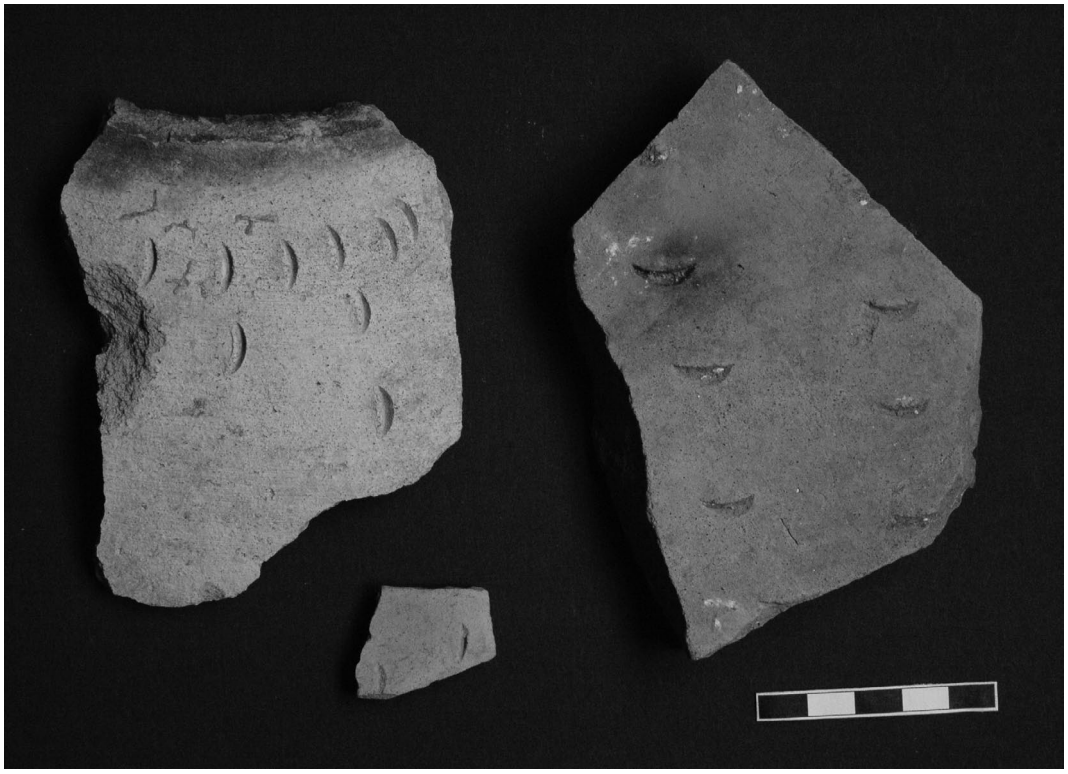

Fig. 8 Pottery found from Phase 1, Square 2.

and the orientation of wall are quite different from those of the third phase. In the first phase, three rooms divided by walls were identified. The walls were constructed using mud-bricks, measuring about 30 × 60 cm. Each wall is about 60 cm wide, and run north-west and south-east. In contrast to the walls in the upper phases, they did not have stone foundations.

For the third millennium B.C., there are a lot of chronological terms. For example Early Bronze I to IV, Early Jazira, and so on (Pruß 2004, Pfälzner 1997, Lebau 2000). To analyze the pottery found from Tell Ghanem al-Ali, I would firstly like to compare it to the chronological scheme by Anne Porter. The reason why I chose it is that it was established using the pottery from the middle Euphrates.

The potsherds found within the structures of the third phase, which is the latest phase, include Plain Simple Ware. And there are a few fragments of Euphrates Fine Ware such as Black Euphrates ware. It seems that similar pottery was found in Phases 3 and 4 in Porter's Chronology.

Almost all the potsherds recovered from the second phase are typical forms of Plain Simple Ware. It seems that they belong to Phase 4 of the Porter's Chronology (Porter 2007). In addition, many sherds of Cooking Pot Ware with everted rims were discovered. The most characteristic pottery found from the first phase has circular or crescent designs incised on their bodies (Fig. 7, 8). But most examples of Plain Simple Ware lack decoration and it is difficult to find a similar type in the porter's chronology. It is difficult to find the comparative examples around middle Euphrates area. However, the circular designs can be found in the assemblage of Amuq G (Braidwood and Braidwood 1960). Taken in the light of the result of radiocarbon dating[1)], it may be possible to suggest that the first phase of Tell Ghanem al-Ali can be placed between the end of the 4th millennium B.C. and the beginning of the 3rd millennium B.C.

In Square 1, there are many plain simple wares and a few metallic wares. It seems that similar pottery was found in Phase 3 in Porter's Chronology. So structures of Square 1 place the same period as the Phase 2 in Square 2.

Fig. 9 Pit grave of Square 6, from the north.

1 As to the result of radiocarbon dating, see the paper of Nakamura in this volume.

Fig. 10 Pottery found from pit grave.

Square 6

In addition of this chronology, we also found a small amount of middle Bronze Age materials (Tsuneki et al. 2009). We also carried out soundings in Square 6, located in the northwestern part of the mound. We unearthed a small pit grave with potsherds dating to the Middle Bronze Age (Fig. 9, 10). It at least provides the evidence of limited use of the site during the Middle Bronze Age (Ohnuma 2009a, 2009b).

Interestingly, the surface collection of the site have produced a few potsherds dating to the Middle Bronze Age, leading us to expect the discovery of related cultural layers within our sondage.

The Relationship between Tell Ghanem al-Ali and cemetery

Before finishing this paper, I just would like to briefly discuss about a clay figurine found on the surface of Tell Ghanem al-Ali. It is 5.7 cm in height and 2.4 cm wide. It has characteristic decorations on the head. The head have a lot of small holes, of which diameter is about 3 mm (Fig. 11). When compared with other clay figurines in the Early Bronze Age, it is a unique type. However, similar figurines have been reported from Hammam et-Turkmen[2], Tell Chuera[3] and Abu Hamad[4].

Abu Hamad is a cemetery site belonging to the Early Bronze Age and the figurines were unearthed from burials (Falb et al. 2005). On the edge of Euphrates Plateau, there are some burial sites other than Abu Hamad[5]. The fact that this figurine was found from Tell Ghanem al-Ali shows the strong relation between people who were buried in the cemetery such as Abu Hamad and those who lived at Tell Ghanem al-Ali (Hasegawa 2009).

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2 van Loon 1988: 566, Pl. 176 fig. 34, 45

3 Orthmann 1990: 30, Abb. 26, 4

4 Falb et al. 2005: 79, Abb. 29, 4; Abb. 41, 8

5 A detail of sites, which located on the edge of Euphrates Plateau will be discussed by Nishiaki and by Numoto and Kume in this volume.

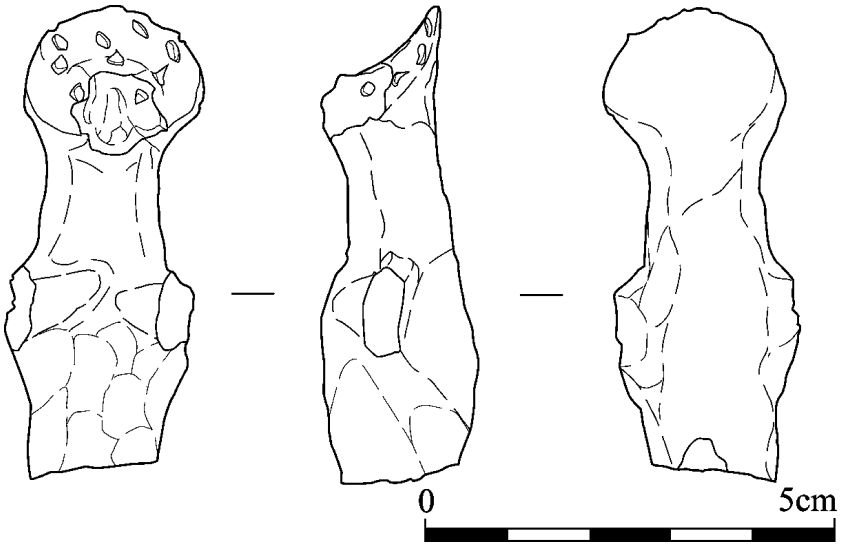

Fig. 11 Clay figurine found from Tell Ghanem al-Ali.

Summary

The results of our sondage suggest that Tell Ghanem al-Ali began to be occupied in the end of the 4th millennium B.C. and the beginning of the 3rd millennium B.C. And It was mainly dwelt during the Early Bronze Age III to the early of Early Bronze Age IVa period. After Tell Ghanem al Ali was abandoned, human activities at Tell Ghanem al-Ali appears to have been restricted, as shown in, for example, small burials.

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ARCHAEOLOGICAL EVIDENCE OF THE EARLY BRONZE AGE COMMUNITIES IN THE MIDDLE EUPHRATES STEPPE, NORTH SYRIA

Yoshihiro NISHIAKI*

Introduction

It is considered that the course of urbanization or state formation processes during the third millennium in the Middle Euphrates, Syria, differed from that in South Mesopotamia. Recent literature argues that the tribal organization derived from nomadic pastoralism played a far more important role in the Middle Euphrates, reflecting its harsh environment that rendered both irrigation and steady rainfall farming impossible. Through intensive fieldwork in the region, researchers have indeed identified a range of distinct tribal features such as ancestry worship, kinship relations, territoriality, and seasonal aggregation in the archaeological records (e.g., Porter 2002, 2008; Falb et al. 2005; Cooper 2006; Peltenburg 2008; Lyonnet 2009). In order to contribute further to the understanding of the social structure in the Middle Euphrates during the third millennium, an archaeological survey was performed as a part of a Syro-Japanese project in the vicinity of Tell Ghanem al-Ali (Fig. 1), the main Early

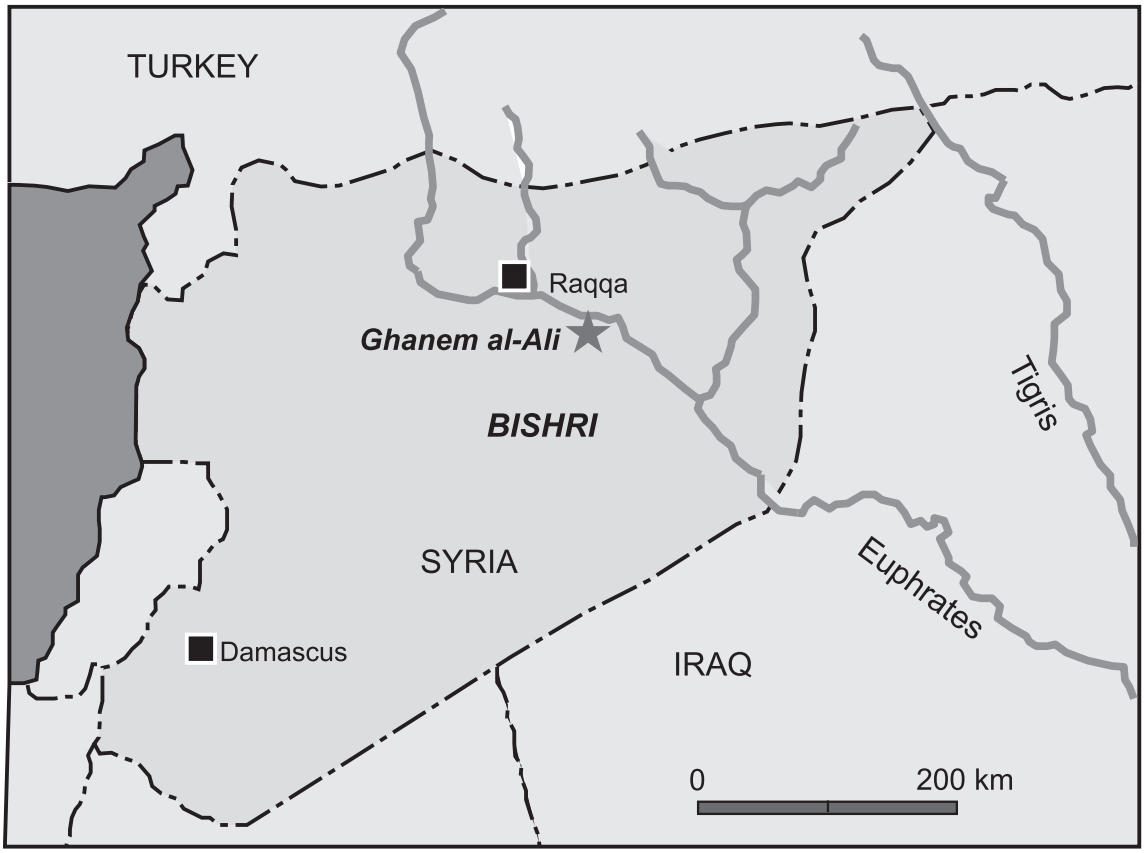

Fig. 1 Map showing the location of Tell Ghanem al-Ali.

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Bronze Age (EBA) site for related excavations (Ohnuma and al-Khabur 2008, 2009; Hasegawa, this volume).

The survey focused on the inland steppe itself, away from the lowland valley, with the aim of filling the current gap of information; many previous arguments are based on evidence from tell-based settlements and cemeteries within the valley. Active salvage archaeological operations have been conducted in the dam flood zones such as the Tabqa Dam and Tishreen Dam flood zones, and areas further upstream (del Omo Lete and Montero Fenollos 1999; Cooper 2006; Peltenburg 2007; and references therein). However, very little related evidence is available from the steppe, which must have been a major subsistence terrain of the nomadic communities (cf. Falb et al. 2005; Wilkinson 2004). In the following, we will present the preliminary results of our ongoing survey project, which attempts to identify the traces of "invisible nomads" (Lyonnet 2009: 188) in the steppe.

The study area and survey method

The study area is semicircular and has a radius of 10 km, spanning the mound of Tell Ghanem al-Ali, approximately 50 km east of Raqqa (Fig. 1). The mound is situated at the right bank of the Euphrates and is surrounded by green agricultural fields in the lowlands plain (Fig. 2). Located toward the south, the lower river terraces are populated by modern villages. The steppe uplands then extend to the Bishri Mountains, which have very sparse vegetation. The terraces and the northern fringes of the upland plateau are incised by a series of north-south tributary valleys (wadis) of the Euphrates. Among these wadis, which stretch over a few kilometres at most in length, Wadi Kharar is distinct because of its length (ca. 20 km) and its well-developed terraces.

Earlier archaeological investigations in the region indicated that the lowlands along the Euphrates were the central loci of tell-based communities. The existence of three EBA settlements at Tell Ghanem al-Ali, Tell Hammadin, and Tell Mugla as-Saghir was known (Kohlmeyer 1984). On the other hand, the upland plateau, which overlooks the Euphrates lowlands, included areas that had dense

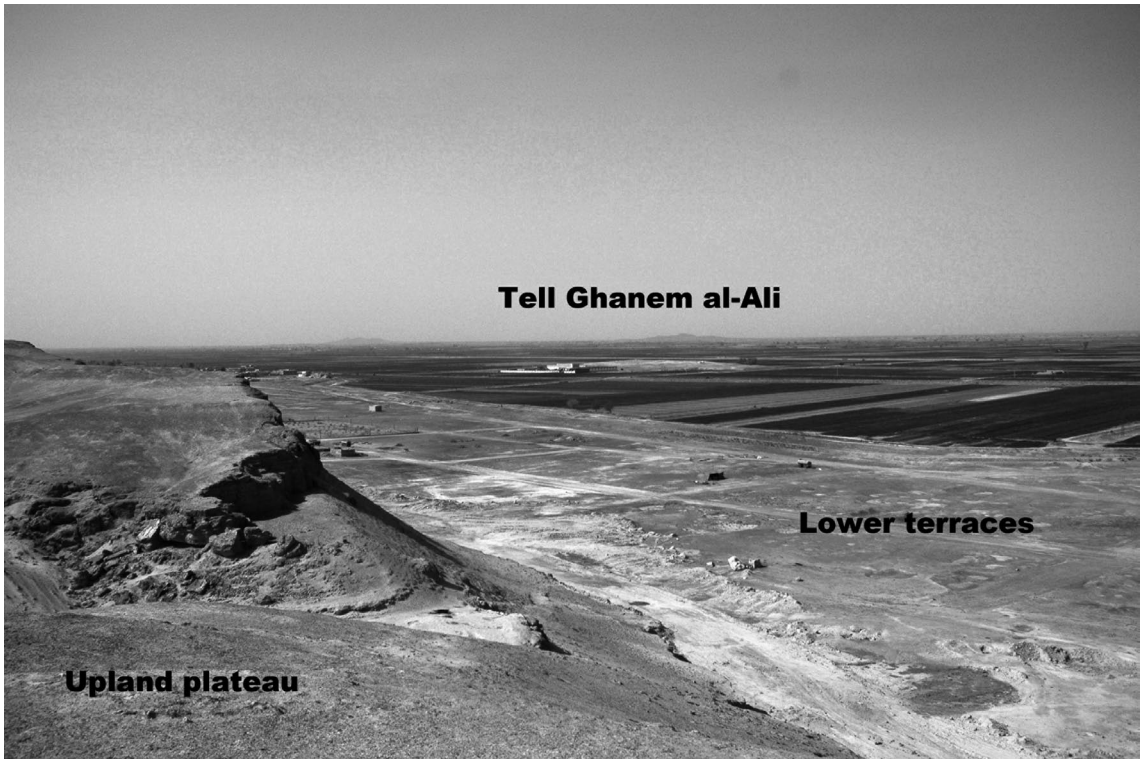

Fig. 2 Tell Ghanem al-Ali, looking northwest.

clusters of tombs from the EBA. Researchers interpreted that these tombs form necropolises of the nomadic pastoralists, the representative one situated at Abu Hamad, which is a few kilometres south of Tell Ghanem al-Ali (Falb et al. 2005).

On the basis of the above insights, we surveyed the Euphrates terraces and the plateau by primarily walking along the wadis. We navigated the area using high-resolution satellite images and a compass. These resources enabled us to record the locations of the survey paths and the discovered sites. A survey path fundamentally corresponded to a single topographic unit such as a terrace or a wadi bank. For the purpose of identification, the surveyed wadis and areas were assigned numbers, while the survey paths and discovered sites within each area were assigned alphabets. Thus, the survey paths and sites were identified as the combination of an area number and an alphabet, for example, 20A and 16K. We collected artefacts from the survey paths and archaeological sites. The identification of archaeological sites was principally based on the density of artefacts, except tombs. We considered the features on the ground surface in the case of tombs. At the archaeological sites, we measured the extent of the distribution of artefacts and features, as well as the general topography around the sites.

EBA archaeological evidence in the steppe

As a result of three seasons of the survey conducted between 2008 and 2009, more than 100 archaeological sites dating from the Palaeolithic to the Islamic periods were documented (Nishiaki et al. 2009, 2010; Nishiaki and Abe 2010). We identified a total of 195 sites by counting multi-occupation sites according to specific chronological units. Quite interestingly, nearly half of them (90 sites) were assigned to the EBA. This sharp rise in the number of excavated EBA sites, which could include those of the nomads, is obviously a marked contrast to the low number of sites from periods before the EBA. This suggests that the widespread exploitation of the upland steppe was initiated during the EBA in an unprecedented manner. As outlined below, there were at least four types of EBA sites: long-term occupations, transitory camps, flint quarry sites, and cemeteries.

Long-term occupations

Long-term occupation does not necessarily refer to year-round permanent settlements, but sites with traces of relatively prolonged habitation. As mentioned earlier, it was already known that three EBA tell-based settlements at Tell Ghanem al-Ali, Tell Hammadin, and Tell Mugla as-Saghir existed in the lowlands. The survey failed to find any more tells in the lowland plain. However, it revealed one small tell-like mound (Area 23H) in the steppe. The mound was situated on a western terrace of Wadi Jazla, ca. 3 km southeast of Tell Ghanem al-Ali, and approximately 400 m inland from the edge of the plateau (Fig. 3) (Nishiaki et al. 2009: 147–148, 161). Apparently, this site was a part of a larger settlement extending to a hilltop in the east, where a massive late Roman fortress (Area 23J) was constructed. A large amount of pottery shards and food-processing tools (e.g., grinding stone slabs and pestles), as well as flaked stones, including farming tools (Canaanean blades) were discovered here. This finding indicated that the occupations on the site continued significantly longer than transitory camps. The collection included both EBA and MBA (Middle Bronze Age) pottery shards. Although a precise date for this mound has not yet been determined, the existence of MBA shards is important because it is believed that the three lowland mounds were abandoned by the end of the EBA (Hasegawa, this volume).

Transitory camps

The sites described as transitory camps only featured flaked flint scatters, without any architecture, ground stone, or pottery. A major problem faced while determining whether or not the flint scatters

belonged to the EBA was the absence of chronologically indicative tools such as Canaanean blades and tabular scrapers. The retouched tools found here were limited only to expedient edge-damaged flakes. The recovered artefacts were merely simple flakes and smashed cores, usually described as

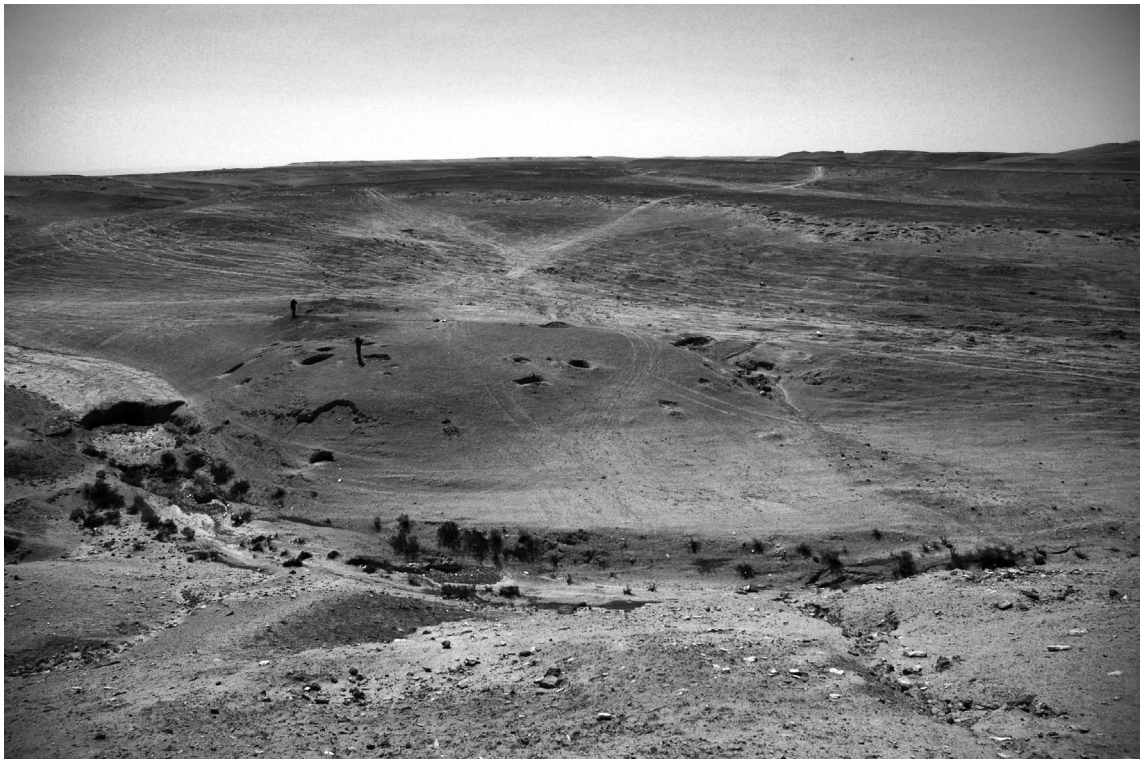

Fig. 3 Jazla West (23H), looking east.

Fig. 4 Wadi Shabout East (20A), looking west.

ad-hoc in the literature (Rosen 1997). However, a comprehensive technological analysis of the EBA flake assemblages from Ghanem al-Ali, and its comparison with the Neolithic to the Late Chalcolithic assemblages from Tell Kosak Shamali (Nishiaki 2001, 2003) enabled us to define the distinct technological features of the EBA flakes, and to conclude that more than 30 flint scatters in the steppe belonged to the EBA (Nishiaki 2009, in press). I named this particular EBA steppe industry *Shaboutian*, after Wadi Shabout East (Area 20A), the representative site where it was discovered (Fig. 4) (Nishiaki et al. 2009: 147). The flint scatters for this industry usually exhibit a small distribution of less than a few hundred square meters; this indicates that the activities were performed by a small group, or that the site was abandoned after short periodical activities. Interestingly, many of these sites are situated on a low and flat terrace of a wadi bend, often enclosed by higher terraces that shield them from the strong desert wind (Fig. 4). Such a location may have provided a safe basin that was ideal for temporary camping and livestock herding.

Flint quarry sites

Flint raw material, one of the indispensable resources for the EBA communities, is hardly visible in the lowlands today because of the accumulation of thick alluvial deposits. However, suitable flint cobbles are clearly observed in the quaternary fluvial gravel deposits of the ancient Euphrates. Major flint outcrops with EBA lithic artefacts were located in two areas. The first was a terrace generally known as Qf II of the Euphrates (Sanlaville 2004), where modern villages, including Tell Ghanem al-Ali, are situated. This terrace must have been easily accessible to the tell communities, since it was located at a distance of a few to several hundred meters away. The other major source is the terrace Qf III, located on the plateau. The distribution of flint outcrops here is limited to particular spots, the most remarkable being a massive flint-strewn field at Beilune (Fig. 5), which

Fig. 5 Flint-strewn field at Beilune (27AF), looking west.

is approximately 9 km to the west of Ghanem al-Ali (Area 27) (Nishiaki et al. 2010; Westaway et al. 2007). Evidently, the above two sources of ancient flint gravel deposits were repeatedly exploited by prehistoric people since the Palaeolithic times. The cores and flakes of the *Shaboutian* type discovered there indicated that they were used by the EBA communities as well (Nishiaki and Abe 2010). Besides, the excavated flint assemblages from Tell Ghanem al-Ali included a small number of reused Lower and Middle Palaeolithic cores (Nishiaki and Abe 2010), which were frequently observed in these gravel deposits (Copeland 2004).

Cemeteries

Owing to the German investigations at Abu Hamad, the existence of numerous EBA cemeteries in the area was well known (Falb et al. 2005). Data from the intensive fieldwork enabled us to record the distributions of more cemeteries in the previously unexplored areas. Most of the tombs were plundered; moreover, pottery shards dating from the EBA were scattered across these tombs. The plundered tombs indicate that shaft tombs and cist tombs were the most common forms, followed by a small number of cairns (tumuli) (Nishiaki et al. 2009, 2010). The tombs seem to form numerous geographically separated clusters, each defined as a cemetery, and these cemeteries in turn form a necropolis. The largest necropolis was Abu Hamad, occupying an area of up to 3 square km. Parts of the cemeteries at Tell Shabout and Wadi Daba, located between Ghanem al-Ali and Abu Hamad, were excavated in this project. These findings confirmed that the necropolis of Abu Hamad extended further toward the north than previously thought (Numoto and Kume 2010a, b).

Apart from the above observations, it is important to mention that two distinct types of cemeteries were revealed. One was a possible mortuary monument (Area 26E). Presently, it is a large rectangular depression situated at the northern edge of the plateau (Fig. 6), south of Tell Mugla as-Saghir. The

Fig. 6 Rectangular depression with shaft tombs along the edge (26E), near Mugla as-Saghir, looking west.

Fig. 7 Cairn field near Beilune (27AL), looking south.

depression, measuring 160 m (east-west) × 63 m (north-south) × 10 m (depth), opens to the north. Considering its regular shape and the absence of a water channel in the basin, it seems that the depression was a manmade structure, and thus, a monument (cf. Peltenburg 2008). Since the southern and eastern slopes of this basin are covered with shaft tombs, the rectangular basin may have been created to simulate the naturally formed low banks in the neighbouring areas that were often used as locations for shaft tombs. In addition, the existence of EBA flaked stones within the basin suggests that other activities were also performed there (Nishiaki et al. 2010).

The other notable type was located in Beilune (Areas 26 and 27), at the eastern limit of our survey region (Nishiaki et al. 2010). The dense distribution of shaft tombs in the other areas was replaced here by clusters of cairns or mound tombs with stone chambers (Fig. 7). Cairns were occasionally found in other cemeteries, including Tell Shabout (Numoto and Kume 2010a) and areas near Tell Hammadin and Tell Mugla as-Saghir (Nishiaki et al. 2009, 2010). However, those at Beilune had a dense concentration of more than one hundred mounds, each approximately 2–3 m in diameter and 1 m in height. They were built with gypsum rocks and contained stone chambers. Some cairns formed larger mounds (up to 35 × 10 × 2 m) containing several stone chambers that were linearly placed. The pottery shards from the plundered tombs include Euphrates Banded Ware from the EBA. Further, there also existed non-disturbed cairns, whose dates are currently unknown. Since this cairn field is extensive and fairly well-preserved, it is important for the study of burial customs as well as the social structure in the EBA.

EBA communities in the steppe and the lowland

The above array of observations indicates that the inland steppe plateau contained very rich EBA archaeological evidence. In addition to its use as graveyards, which was already known, the inland steppe was used for performing various other activities. The evidence from this survey acts as a

valuable source for understanding the nature of the EBA society that penetrated into the steppe. The discovery of numerous flint scatters from this period is particularly interesting. The flint assemblages defined as *Shaboutian* comprise only expedient flakes and cores; they do not include any farming or hunting tools. This observation and the distribution of the assemblages in small isolated spots strongly suggest that they were residues of short-term activities. Moreover, considering the geographical setting that was conducive to wadi terraces, the most likely interpretation is that the flint scatters were derived from pastoralist camps. Thus, the identification of the *Shaboutian* industry seems to make "invisible" pastoralists "visible" in the EBA archaeological records (Nishiaki 2009, in press). The frequent occurrence of the flint scatters indicates that the inland steppe was extensively exploited by small groups of EBA communities. The main question here is whether these groups were nomadic pastoralists or herders dispatched from the lowland settlements. The lithics from the scatters in the steppe are indistinguishable from those excavated at the settlement of Ghanem al-Ali. However, this finding does not necessarily indicate that the occupants were herders because the nomadic pastoralists might have shared the same tool manufacturing tradition.

A similar question can be posited for the relationship between the lowland settlements and the large number of cemeteries in the steppe. The excavations of Ghanem al-Ali (Ohnuma and al-Khabur 2008, 2009; Hasegawa, this volume) and those at the cemeteries of Abu Hamad (Falb et al. 2005), Tell Shabout (Numoto and Kume 2010a) and Wadi Daba (Numoto and Kume 2010b) demonstrate that all of them belong to the same limited time range of EB III–IVa. Were the dwellers at Ghanem al-Ali buried in these cemeteries? The excavators of Abu Hamad argue that the cemeteries belonged to nomadic pastoralists based in the steppe (Meyer 2005, this volume). This interpretation arises from the facts that the overwhelmingly large number of tombs cannot be accounted for the rather small and short-lived settlements on the lowland, such as Ghanem al-Ali (ca. 12 ha), and that the necropolis itself is located at a distance. In the case of Abu Hamad, it is approximately one to three km away from Ghanem al-Ali. Likewise, the distribution pattern of specific types of tombs, and thus, the structure of each cemetery, differs from that known for other EBA settlements in the valley. The pottery assemblages displaying contacts with far remote regions are also considered to suggest that the buried were nomads.

If this assumption is correct, which is quite likely to be the case, we should aim to explain the spatial association of the cemeteries with the lowland settlements. Our survey shows that the lowland settlements, including Ghanem al-Ali, were clearly linked to the distribution of cemeteries in the upland. The three spatial clusters occur at regular intervals of five to six kilometers from each other (Fig. 8). One possibility is that the nomadic pastoralists in the steppe had close (kinship) relations with their counterpart in the lowlands; this could have led to a contract for using the grazing field. On the basis of our survey data, however, I would rather suggest that the cemeteries in the steppe belonged to both the steppe and the lowlands dwellers. Further, it would not be reasonable to emphasize their dichotomy (Porter 2008). They could belong to the same community that practiced both herding and farming on a seasonal basis; such an economy is explicable in this dry area with an annual precipitation of less than 200 mm. While no EBA cemetery has been discovered in the lowland, an extra-mural cemetery was recovered at Wadi Daba on a lower river terrace, a few hundred meters to the south from Ghanem al-Ali. The sounding there revealed a burial complex dominated by shaft tombs of the EBA (Numoto and Kume 2010b). The current evidence suggests that this was a cemetery for Ghanem al-Ali; however, what complicates the situation is that the extension of the Wadi Daba cemetery continued to the plateau cliff, right on which Tell Shabout and the necropolis of Abu Hamad are situated. In other words, the necropolis of Abu Hamad is not physically well distinguished from the lowland settlement, and is not as remote as previously thought (Meyer 2005).

In light of this, it could be possible to postulate that the lowland dwellers and the pastoralists

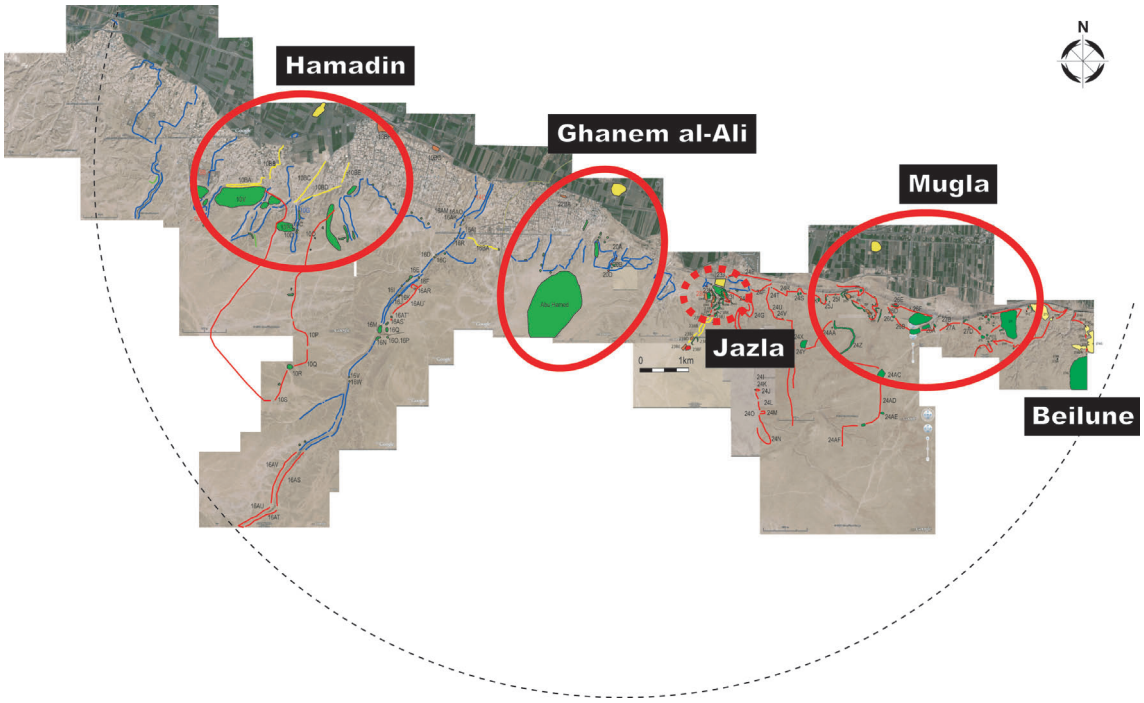

Fig. 8 Map showing clusters of the lowland settlements and the steppe cemeteries from the EBA in the study area. The date for the cluster at Jazla has not been precisely determined. Dotted line: 10 km radius from Ghanem al-Ali. Yellow dots: mounds, Green areas: cemeteries.

buried in the steppe belonged to the same community of an unknown tribal level. The consistent pairing of a lowland settlement and a cluster of the steppe cemeteries appears to represent another community level. The presence of deep wadis situated intermediately, i.e., Wadi Kharar between Hammadin and Ghanem al-Ali, and Wadi Jazla between Ghanem al-Ali and Mugla as-Saghir (Fig. 8), could have even served as territorial boundaries among the communities. The material remains further exemplify the strong link between the lowland and the steppe. Needless to say that in the use of the identical lithic industry (*Shaboutian*) and pottery, we also should note a similarity in the symbolic aspect. The clay objects from Ghanem al-Ali included a unique human figurine with a flat round head decorated with incised dots (Hasegawa 2009: 146). Figurines of the same type, whose distribution is rather limited on the Middle Euphrates, have been uncovered at Abu Hamad as well (Falb et al. 2005, Abb. 29–4, 41–8), indicating that even the symbolic belief was shared.

A comprehensive study of the necropolis at Abu Hamad revealed elements reflecting the tribal nature of the steppe community and its possible chronological change within the EBA (Meyer 2005). Future study of our survey data, which covers a larger area, should shed light on the social structure of the steppe community from different perspectives. An interesting issue will be to explore the change from EBA to MBA. The archaeological evidence for MBA is hitherto limited to the area near Jazla. If excavations confirm the date, the only habitation site in this period would be represented. The location of the settlements in the upland suggests a radically different way of life from that in EBA, when settlements were situated in the lowland. Further, investigating the social change over these periods observed from mortuary practice will be an interesting topic for future research. While MBA tombs are sparse in the study area, they are remarkably concentrated in the Bishri Mountains further away from the river, where EBA tombs have been unknown to date (Fujii and Adachi, this volume). Moreover, the structure of the cemeteries is different. While the cairns represented the predominant tomb-type of the MBA in the Bishri Mountains, they seemed to be mixed with other types of tombs in the study area during the EBA. They were usually situated along the

edge of the plateau that overlooks the lowlands (Nishiaki et al. 2009, 2010). An exception to this pattern is the above massive cairn field at Beilune. A comparison of the social organization reflected in the cemetery types between these two periods will lead to an important insight into the organization of the EBA society.

Conclusion

Our survey yielded numerous new observations about the EBA society in the steppe. These observations include the discovery of various transitory camps and resource acquisition spots indicated by lithic scatters, the finding of a close link between the steppe cemeteries and the lowland settlements, and the identification of diverse cemetery types such as a cairn field and a possible mortuary monument. While all of these remain to be studied in detail, this project clarifies one aspect at this point of research: the inland steppe in the Middle Euphrates has abundant archaeological evidence that are quite possibly related to the nomadic pastoralists of the EBA. This finding suggests that a considerable amount of additional evidence may be discovered in the coming seasons of the survey. When combined with relevant information on the lowland settlements and findings of previous studies conducted in the upstream of the valley, these "visible" records should provide us with an exceptional opportunity to study a wide range of issues on the nature of the hitherto "invisible" EBA society during the crucial period of urbanization in the steppe of the Middle Euphrates.

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SURVEYS AND SONDAGE AT THE CEMETERIES NEAR THE SITE OF TELL GHANEM AL-'ALI

Hirotoshi NUMOTO* and Shogo KUME**

Introduction

Immense extramural cemeteries characterize mortuary practices during the Early Bronze Age on the Middle Euphrates. However, they have frequently been plundered in modern and antiquity. Recent Syro-Japanese archaeological investigations in the surroundings of Tell Ghanem al-'Ali also attested several massive Early Bronze Age cemeteries, which have been seriously disturbed by robbers. This paper aims to explore structures of the cemeteries through the examination of such damaged mortuary data. The first section begins with a summary of results of 2008–2009 field seasons at Wadi Shabout and Wadi Daba burial areas adjacent to Tell Ghanem al-'Ali. The following sections examine the results of the fieldwork from typo-chronological and socio-political points of view. The last sections summarize some ideas on the potentials of investigating those burial areas, considering recent growing concerns of relationship between the living and the ancestors, nomadic and sedentary ways of life, and group identities in the region.

Extramural burials around Tell Ghanem al-'Ali

Two Early Bronze Age extramural burial areas named Wadi Shabout and Wadi Daba have been found in the surroundings of Tell Ghanem al-'Ali. Wadi Shabout burial area is situated on the northern edge of the Bishri plateau, approximately 1 km south of Tell Ghanem al-'Ali. On the other hand, Wadi Daba burial area is located at the slopes of the wadi bank and a lower terrace of the Euphrates. The burial area is currently surrounded by the modern village of Ghanem al-'Ali, some 650 m apart from the archaeological settlement (Fig. 1). The two burial areas show a marked contrast not only in their upland-lowland locations, but also in their types of graves. Wadi Daba burial area principally consists of earth-cut shaft graves, while Wadi Shabout burial area additionally includes various types of graves, like stone chamber graves, cist graves as well as high mound tombs or tumuli (Tsuneki 2008).

Fieldwork at the burial areas has been undertaken since 2008 (Numoto and Kume 2009a, 2009b, in press (a), (b)). Towards the goals of the Syro-Japanese project, our primary aim was to explore relationships between graves and past group identities in the Early Bronze Age of the Middle Euphrates region through a documentation of types of graves, since seriously plundered graves in the burial areas currently disturb detailed analysis of grave goods or human remains. In addition, the cemetery on the Bishri plateau including Wadi Shabout burial area contains estimated thousands of plundered graves in an area of 3.5 × 1.5 km. Considering such immense archaeological loci, our investigation included the extensive survey of burial types in the areas and the cleaning and sounding of selected sites.

Our fieldwork is still ongoing, but the variability of grave types across the landscape provides some relevant insights into our attempts despite the seriously damaged mortuary data. On the basis

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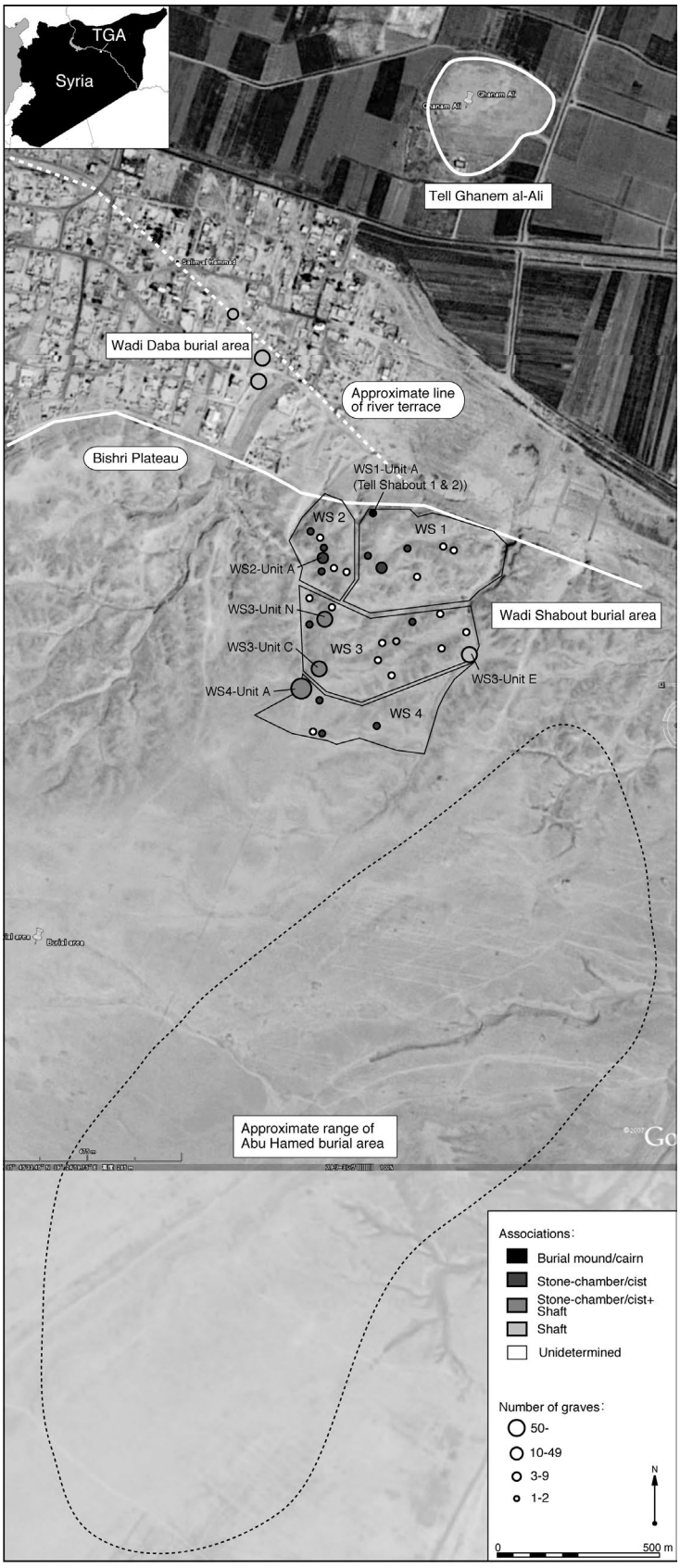

Fig. 1. Research area and distribution of the grave clusters (Satellite image after *Google Earth*; Approximate range of Abu Hamed after Falb et al. 2005).

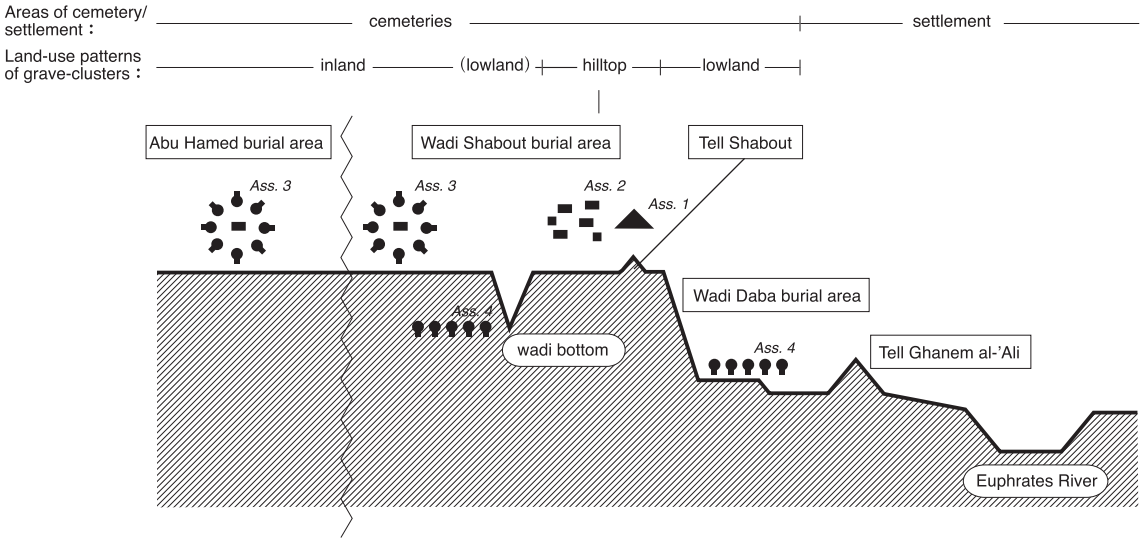

Fig. 2. Schematic section of research area and land-use patterns of the grave clusters.

of the associations of grave types and their locations, four unique categories of grave-clusters were defined as 1) hilltop burial mounds/cairn, 2) hilltop stone chamber/cist graves, 3) inland stone chamber/cist graves with earth-cut shaft graves, and 4) lowland earth-cut shaft graves (Fig. 2).

Hilltop burial mounds/cairn (Association 1)

A grave cluster consists of two mound tombs called Tell Shabout by locals (WS1-Unit A or Tell Shabout 1 and 2), overlooking Tell Ghanem al-'Ali and the Euphrates Valley, situated on high bluffs between Wadi Shabout and a small unnamed wadi, some 279 m above sea level. Our sounding in 2009 (Numoto and Kume in press) revealed that the earthen mounds were built during the Hellenistic/Roman periods, but an above-ground burial cairn piled with gypsum stones was attested immediately beneath one of the mounds (Tell Shabout 1. See Fig. 3-1). Because the cairn was apparently destroyed before the earthen mound was built, very few artefacts were collected from the Early Bronze Age deposits. Nevertheless, salvaged samples, including a possible sherd of Euphrates Fine Ware, a bronze dagger and a ring, or flint flakes of so-called Shaboutian (Nishiaki this volume), allow us to date the cairn to the later half of the third millennium BC.

Hilltop stone chamber/cist graves (Association 2)

The second category of the associations comprises stone-built subterranean graves, i.e., stone chamber graves or cist graves. For example, at WS2-Unit A (Fig. 3-2), a total of six graves, including three stone chamber graves, two cist graves, and a combined form of stone chamber and cist graves, were attested (Numoto and Kume 2009a). WS2-Unit A is also located at the northern edge of the Bishri plateau with a fine lookout. This category is also identified as one or two isolated graves, spreading over the research area, (Fig. 1), but those are located at the top of a small natural elevation in general.

Inland stone chamber/cist graves with earth-cut shaft graves (Association 3)

The third category of grave clusters consists of a small number of stone chamber graves and/or cist graves and abundant earth-cut shaft graves (Fig. 3-3). In general, stone chamber and/or cist graves are situated on a small natural elevation such as wadi terraces like Association 2, while shaft graves are excavated into slopes of the elevation, surrounding the stone-built graves on the top. This category of grave clusters was only identified in areas of interior parts of the Bishri plateau (WS3-Unit A and N, and WS4-Unit A. See Fig. 1). Several grave clusters at a burial area of Abu Hamed (Falb

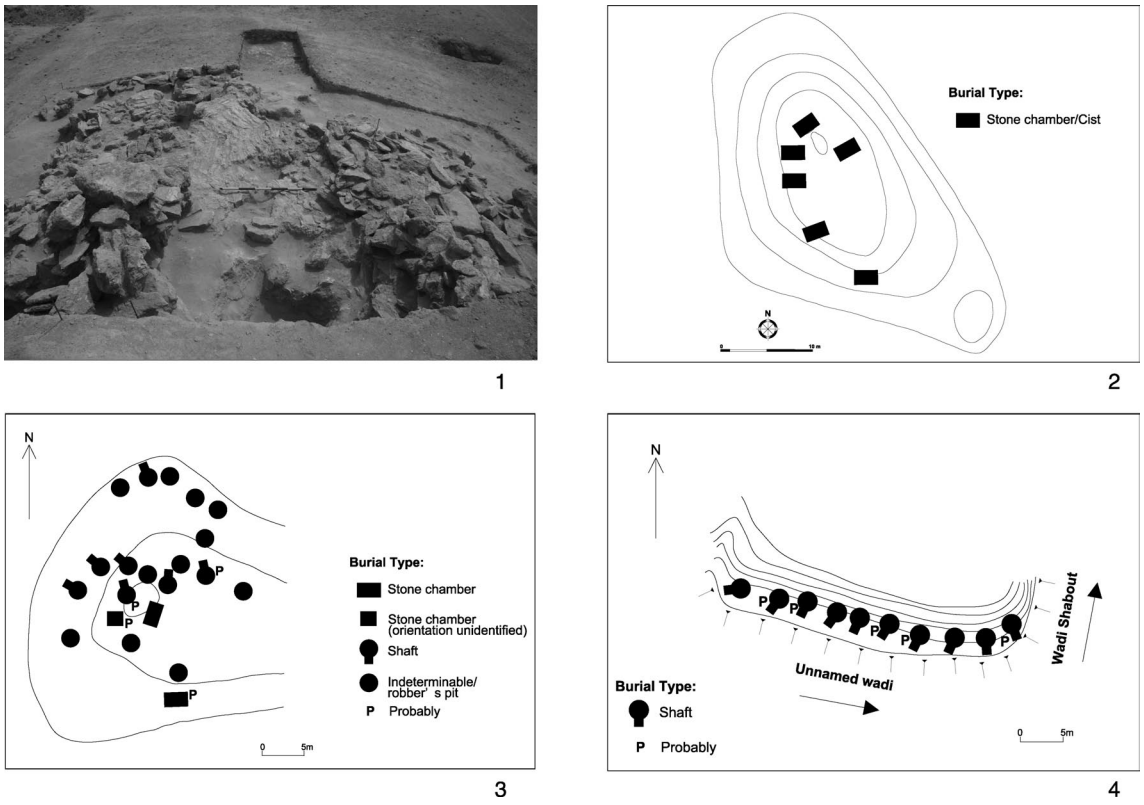

Fig. 3. 1. Burial cairn (Association 1) uncovered immediately beneath Tell Shabout 1 (WS1-Unit A), looking south. 2. Sketch plan of Association 2 (WS2-Unit A). 3. Sketch plan of Association 3 (WS3-Unit N). 4. Sketch plan of Association 4 (WS3-Unit E).

et al. 2005) situated on some 1 km south of the northern edge of the Bishri plateau might also be included in this category.

Lowland earth-cut shaft graves (Association 4)

The last category of grave cluster exclusively consists of earth-cut shaft graves (Fig. 3-4). Wadi Daba burial area situated in the Euphrates valley is a representative of this type of grave cluster. The association was also found on the upland area (WS3-Unit E. See Fig. 1), located at a wadi bottom, where some ten earth-cut shaft graves have been excavated into a steep slope of the wadi bank.

The 2008–2009 field seasons including survey, cleaning, and sounding at Wadi Shabout and Wadi Daba burial areas adjacent to Tell Ghanem al'Ali revealed that four unique associations of different types of graves were defined at the areas, and that the different associations tend to be located at different locations. How do we explain possible factors that generated the unique grave clusters? What is the relationship among the individual graves within the cluster? These questions should be crucial if mortuary practices potentially reflect some aspects of past human identities (e.g. Parker Pearson 2003).

To begin with, why are there various types of Early Bronze Age graves on the Middle Euphrates? Recent comprehensive studies of burial types in the region conducted by L. Cooper (2006, 2007) assessed several possibilities of the backgrounds, including time, polity, gender, status as well as ethnicity. In particular, focusing on uneven distributions of cist graves and earth or rock-cut shaft graves between the north and the south of the region, she proposed that these two different types of graves might have reflected distinctive ethnic identities, like the Hurrians in the north and the Amorites in the south.

The discussion provides a valuable insight into a materialization of diverse group identities in the period. On the other hand, seriously plundered burials with poorly preserved grave goods and human remains in the Middle Euphrates Valley prevent us from taking empirical approaches to support such a considerable interpretation. Our damaged mortuary data, merely consisting of grave types from the two burial areas near Tell Ghanem al-'Ali, might also not be sufficient for the detailed analysis. Cooper's approaches to burial types are generally divided into two parts: a chronological ("time") and some social ("polity", "gender", etc.) concepts. According to the two concepts, we begin with a review of typo-chronological ideas of previous studies. Then we discuss some socio-political thoughts on the grave-clusters in the burial areas near Tell Ghanem al-'Ali.

Typo-chronological assessment of the graves

The establishment of the typo-chronology of the Early Bronze Age graves in the Middle Euphrates region has not yet been achieved due to several reasons. For example, re-using of graves over several generations were frequently performed during the period (Carter and Parker 1996: 110). Unequal weighting of a particular type of grave, i.e. earth or rock-cut shaft graves, in publications may also be considered, perhaps for the reason of their better preservations (Porter 2000: 404). In addition, the plundered nature of the graves in the region is detrimental to the study. As a result, some scholars suggest that there is no correlation between types of graves and chronology (e.g. Porter 2000: 403). Nevertheless, several typo-chronological approaches to the graves have thus far been conducted.

W. Orthmann (1980: 104), dividing the second to fourth quarters of the third millennium BC into three phases, proposed a brief typo-chronological idea that stone chamber graves frequently occurred in the earlier phases, while shaft graves in the later phases. Following similar chronological division of the period made by Orthmann, combined with 14C dates, E. Carter and A. Parker (1996: 110–111, Table 14.1) suggested a diachronic transition from stone chamber graves and cist graves to shaft graves in some detail (Fig. 4). These ideas have generally been accepted by the recent extensive discussions of mortuary practices on the Middle Euphrates (Cooper 2006, 2007). Although stone-built stone chamber and cist graves apparently occurred earlier than shaft graves in the region, each type of the graves has also co-existed in some cases (Fig. 4) as has already been suggested

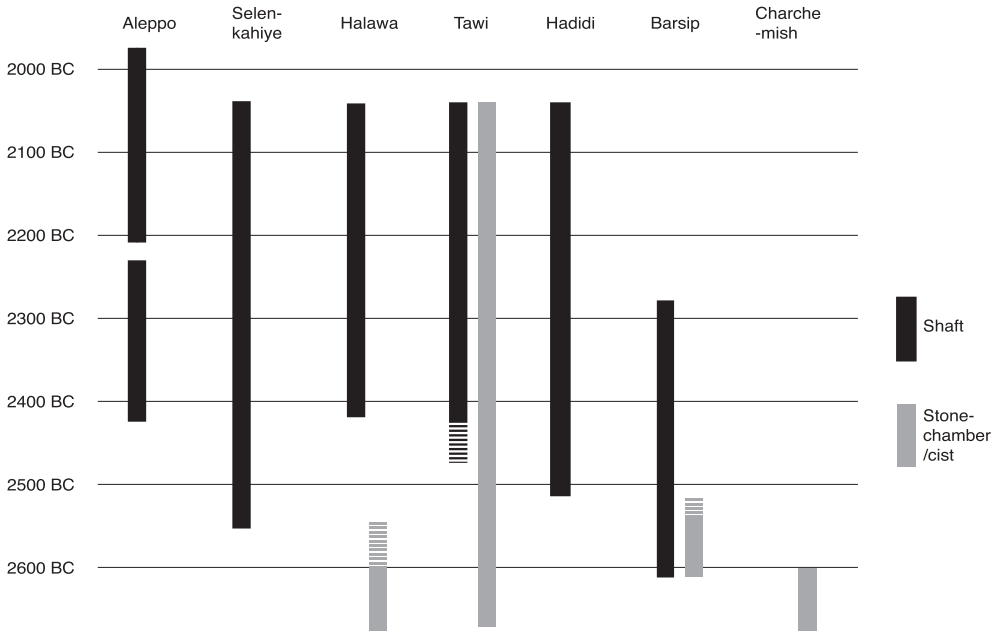

Fig. 4. Typo-chronology of burial types in the Syrian Euphrates (after Carter and Parker 1995: Table 14.1).

elsewhere (Akkermans and Schwartz 2003; Cooper 2006). Such co-occurrences of different types of graves were attested at cemeteries of Tawi and Shamseddin in the Tabqa reservoir area, for example (Cooper 2007: 65–66). Consequently, the diachronic transition from stone-chamber or cist to shaft during the third millennium BC is at least a general trend, but not a typo-chronological development.

Attempts to establish the typo-chronology of the graves in the Early Bronze Age still remains to be difficult. However, the general trend of the diachronic transition from stone-chamber or cist to shaft potentially provides some insights into inter-/intra variability of types of the graves among the associations we defined, suggesting different chronological phases that they were generated. We shall return to the point later.

Extramural cemeteries in socio-political context

Many scholars characterize the Early Bronze Age (and also Middle Bronze Age) communities in the Middle Euphrates Valley as "tribal" institutions of pastoral nomads (e.g. Porter 2002; Cooper 2006; Peltenburg 2007). As Cooper (2006: 270–274) has appropriately summarized, three inter-related features of the settlements in the region have been involved. First, the Middle Euphrates is situated on the margin of 200 mm isohyet, where rain-fed agriculture is not impossible but quite risky because of fluctuations of annual precipitations (Wilkinson 2004). For this reason, alternative subsistence strategies, such as herding and hunting, were required. Second, less hierarchical settlement systems in the region (see also Bunnens 2007), contrast to centralized settlement patterns of the Upper Khabur above the 250 mm isohyet line (Ristvet and Weiss in press) or irrigated southern Mesopotamia (e.g. Pollock 1999), is also pushed forward, suggesting segmented nature of the communities. Third, sparseness of large buildings at individual settlements illustrates non-elite or corporate political system rather than centralized authority.

These general features more or less correspond to the characteristics of modern Arab tribal organization, such as "territorial", "segmentary", "patrilineal", and "descent" (Akahori in press. See also Van der Steen 2009: 105–106). It seems also that archaeological evidence around Tell Ghanem al-'Ali, the loci of mortuary practices in particular, illustrates such tribal nature of the communities.

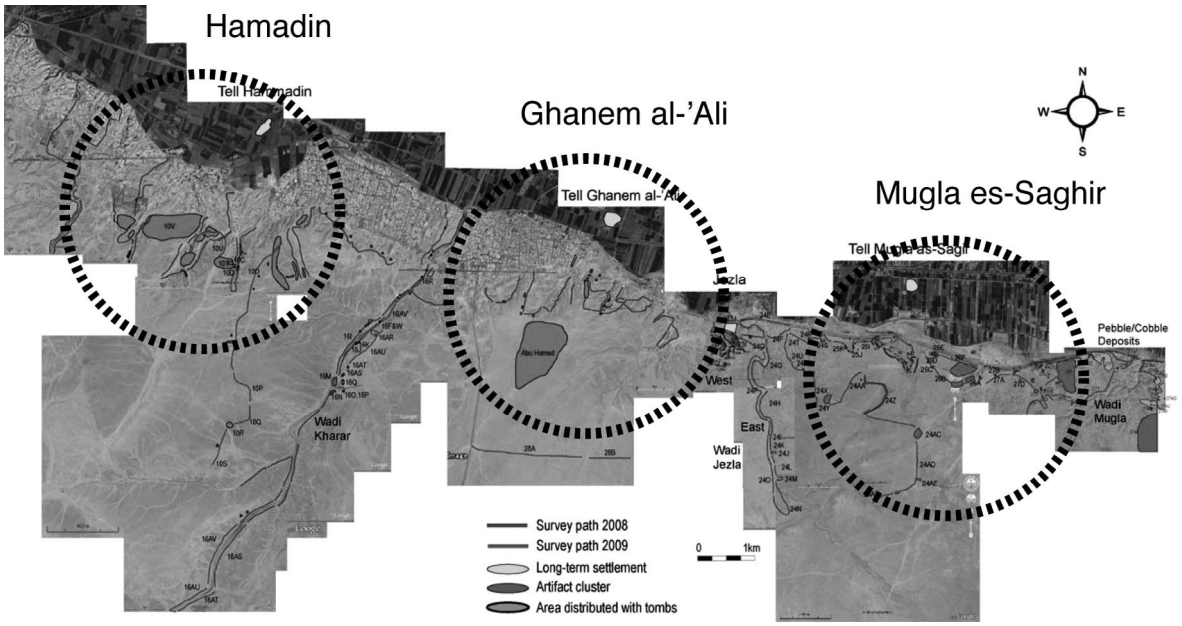

Fig. 5. Parings of massive cemeteries and settlements around Tell Ghanem al-'Ali (after Nishiaki et al. in press).

For example, archaeological survey in an area of 10 km radius of Tell Ghanem al-'Ali demonstrated obvious pairings of extramural cemeteries on the upland plateau and the Early Bronze Age settlements in the lowland valley, including Tell Hamadin and Tell Mugla es-Saghir as well as Tell Ghanem al-'Ali (Fig. 5). In addition, the boundaries of the individual parings, containing natural borders like large wadi courses, apparently suggest a territorial or perhaps grazing range of the communities (Nishiaki et al. in press. See also Nishiaki this volume).

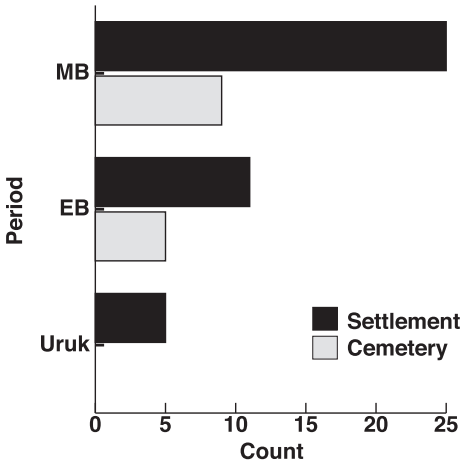

Fig. 6. Occurrences of Uruk-MB cemeteries and settlements between Deir ez-Zor and Abu Kamal (after Geyer and Monchambert 2003).

These observations have to be tested through the examination of rigid archaeological evidence, since the deceased of the burial areas are not necessarily the inhabitants of the neighboring settlements. For example, it has been assumed that the deceased of Abu Hamed might partly belong to mobile sectors in the region rather than sedentary because of the isolated location of the cemetery and the large-scale number of the graves (Meyer 2005; See also Akkermans and Schwartz 2003; Peltenburg 2007–2008). Although recent growing concerns and re-evaluations of the dichotomy of the mobile and sedentary ways of life argue that those lifestyles were flexibly practiced (e.g. Castel and Peltenburg 2007; Marx 2007; Buccellati 2008; Porter 2009), the opposite views on extramural burial areas near Tell Ghanem al-'Ali need to be assessed in light of empirical data, like physical and genetic analyses of human remains.

However, it is remarkable at the present that cemetery sites were becoming obvious archaeological traits during the Early Bronze Age. Although immense extramural cemeteries are distinctive mortuary practices of the middle Euphrates valley in the period as mentioned above (e.g. Akkermans and Schwartz 2003; Cooper 2006), an archaeological survey conducted in an area between Deir ez-Zor and Abu Kamal (Geyer and Monchambert 2003) have also recorded that cemetery sites appeared since the Early Bronze Age (Fig. 6). In this context, it is also worth recalling Saxe-Goldstein hypothesis 8, which argue that "the emergence of formal cemeteries corresponds to the appearance of agnatic lineages monopolizing vital resources through inheritance" (Morris 1991: 147).

The archaeological investigations of our project are still ongoing. It appears, however, that mortuary evidence so far acquired around Tell Ghanem al-'Ali demonstrates possible materializations of the elements of tribal communities, such as "territorial", "segmentary", "patrilineal", and "descent". For example, the parings of the cemeteries and the settlements may suggest "territorial" and "segmentary" nature of the communities. Visible massive cemeteries may imply "patrilineal" and "descent" attributes of the organizations.

Dynamics and structures of the grave-clusters: a tentative model

As described above, first, we reviewed the typo-chronological ideas of Early Bronze Age burials in the Middle Euphrates Valley. Second, we briefly discussed our mortuary evidence around Tell Ganem al-'Ali in socio-political contexts in the region. Considering these points, how do we explain the possible backgrounds of the four categories of the grave-clusters we defined at the burial areas of Wadi Shabout and Wadi Daba?

The possibility that stone-chamber or cist graves are earlier than earth-cut shaft graves perhaps provides a significant insight into Association 3 in particular, since we can assume intra-site diachronic developments of the aggregations of the graves. In addition, based upon tribal socio-political

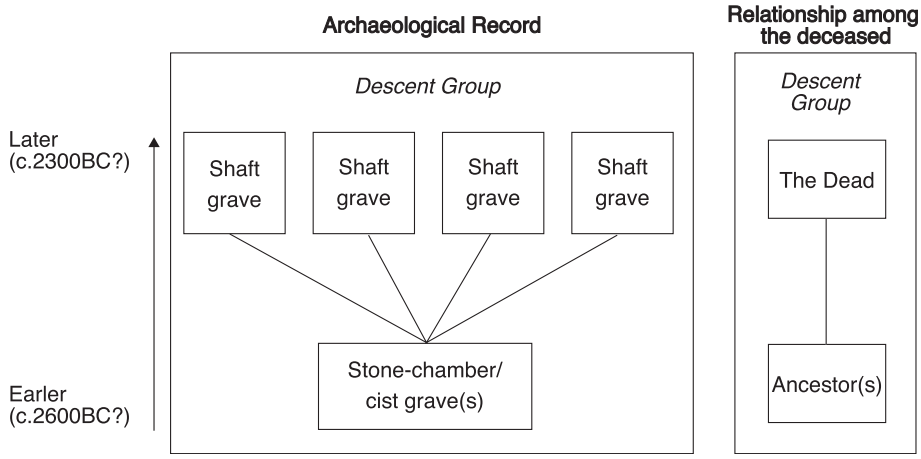

Fig. 7. Association 3: archaeological record and relationship among the deceased.

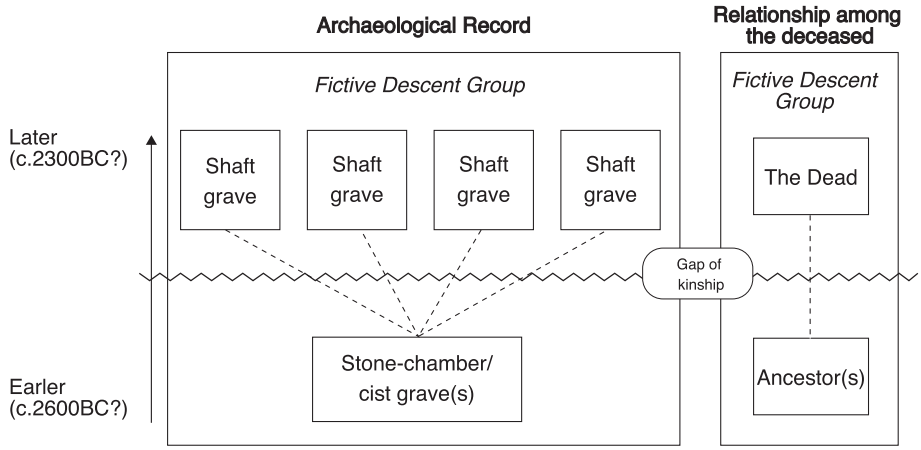

Fig. 8. Association 3: archaeological record and relationship among the deceased (in case of assumed fictive kinship).

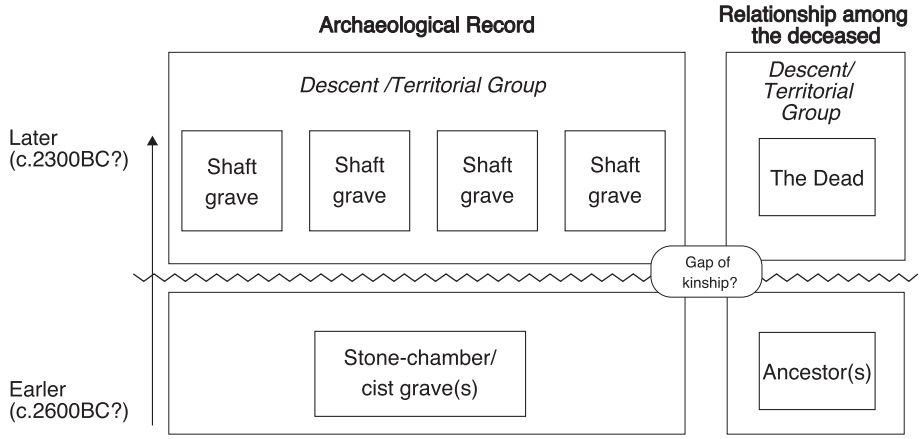

Fig. 9. Association 4: archaeological record and relationship among the deceased.

characters in the region, the individual grave-clusters might demonstrate units of descent groups, such as families or lineages, as has already been suggested at contemporary sites of Abu Hamed (Meyer 2005) and Tell Bi'a (Bösze 2009) as well as other sites in the Middle Euphrates Valley (Akkermans and Schwartz 2003). Consequently, it is assumed that the deceased of earlier stone-chamber or cist graves is the ancestors of those of later shaft graves (Fig. 7). However, it may not be necessary to assume real kin-based bonds between the deceased of those two types of graves. Instead, fictive kinship would also be considered (Fig. 8), since different types of graves may imply distinct ethnic identities (Cooper 2006, 2007). Although fictive kinship have frequently been observed in historical, ethnographical and archaeological literatures, Porter (2002, 2009) has already discussed in the funerary contexts of the third millennium Middle Euphrates Valley as well. In addition, the re-use of mortuary sites is occasionally interpreted as legitimation of descent from some authorities (e.g. Bradley 2002). In summary, there are two possibilities that the deceased of shaft graves were descendants of those of stone-built graves or newcomers from other areas.

On the other hand, Association 4, consisting only of shaft graves, was perhaps built at the same time with Association 3 or slightly later. Because shaft graves of Association 4 have not associated with earlier stone-built graves, the deceased of Association 4 might not be related, not necessary to be related, or not possible to be related with the deceased of earlier stone-built graves or the real/fictive ancestors. In this sense, there are also two possibilities that the deceased of Association 4 were collateral descendants of Association 3 or other newcomers, perhaps implying lower status than the deceased of Association 3 (Fig. 9).

Third and fourth, Association 2, consisting of only stone-chamber graves or cist graves, was at least earlier than Association 3 and 4, implying that the deceased were earlier setters of Tell Ghanem al-'Ali. On the other hand, the deceased of Association 1 or the burial cairn might be the earliest setters, located at the visible high bluffs.

In summary (Fig. 10), the earliest settlers built the cairn at the edge of the Bishri plateau. Their lifestyle might be closely connected with mobile way of life, like the deceased of later Middle Bronze Age burial cairns in the Bishri mountains (Fujii and Adachi this volume). Around the same instance, other earlier settlers built stone chamber graves or cist graves as Association 2. After a

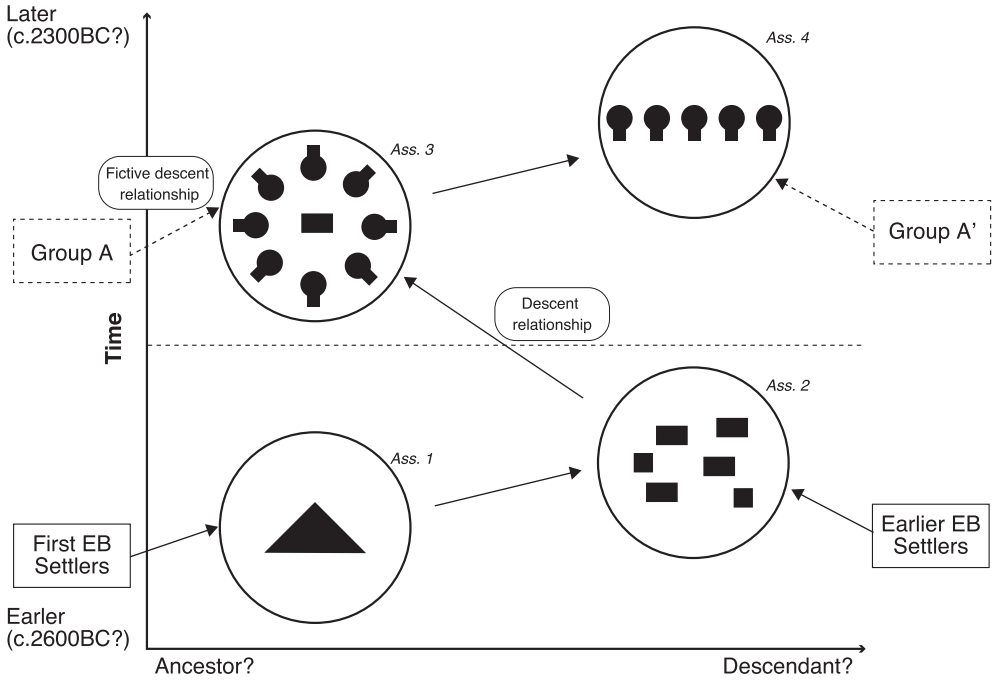

Fig. 10. Dynamics and structures of the Early Bronze Age grave clusters around Tell Ghanem al-'Ali.

brief instance, the descendant of the earlier settlers of Tell Ghanem al-'Ali or newcomers from outside built shaft graves in the surroundings of Association 2 stone-built graves, forming Association 3. Finally, the collateral descendants of Association 3 or other newcomers built Association 4.

Some remarks

This paper proposed a possibility of materialized real or fictive kinship ideologies through the damaged archaeological record, considering several previous studies that discuss kin-based socio-political characters of the societies during the Early Bornze Age on the Middle Euphrates in particular (e.g. Peltenburg 1999, 2007–2008; Porter 2002, 2009; Meyer 2005; Cooper 2006). However, our provisional conclusion mentioned above still need to test based on well-preserved mortuary data. In the last 2009 autumn season, a well-preserved shaft grave was uncovered at the Wadi Daba burial area (Numoto and Kume in press (b)). The area probably includes undisturbed graves, allowing us to examine relatively rich mortuary dataset in near future. Through further investigations, we may come around to assess real or fictive kinship ideologies, tribal formation and the Amorites in the region.

Acknowledgements
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ARCHAEOLOGICAL INVESTIGATIONS OF BRONZE AGE CAIRN FIELDS ON THE NORTHWESTERN FLANK OF MT. BISHRI

Sumio FUJII* and Takuro ADACHI**

1. Introduction

It is commonly accepted that a large palaeo-Semitic group, *Mar-tu* in Sumerian or *Amurru* in Akkadian, holds a key to understanding the socio-cultural dynamics of Syro-Mesopotamia in the 3rd and 2nd millennia B.C. Nevertheless, little is known about their pastoral background before they penetrated into sedentary communities. This is precisely because traditional studies have centered on their projected image on cuneiform texts and, with only a few exceptions (Lönnqvist 2006, 2008), no full-scale archaeological investigations have taken place in the Bishri region referred to as their original base. Our research project aimed to shed light on their specific footprints in the supposed homeland. For this objective, we conducted a series of archaeological surveys and soundings on the northwestern flank of Mt. Bishri, central Syria. This report briefly summarizes the investigation results and, on this base, offers a new perspective on the key issue.

2. Research Field

We defined our research field as a rectangular sphere encompassed by the following four sides: the latitude line of N 35° 25' and the main stream of Wadi Thulethowat in the north, a long escarpment bordering the Homs prefecture in the south, the longitude line of E 039° 10' in the east, and a track extending southward from the small village of Bir Rahum in the west (Fig. 1). It covers ca. 150 square kilometers in total area, which is equivalent to approximately one tenth of the whole range of Mt. Bishri when defined as a hilly terrain more than ca. 500 m in altitude.

The research field is characterized by an arid climate and its consequent poor vegetation. Since no perennial natural water sources are available, no traditional settlements exist in this area. The local vegetation is also very poor, being limited to thorny shrubs dotted on wadi beds and surrounding slopes (Akashi and Tanno 2009). Our investigations suggested, however, that a large group of ancient pastoral nomads based themselves in the area, probably taking advantage of a short-term climatic amelioration or, conversely, in the aftermath of temporal aridification in the sedentary spheres to the north and the east (Weiss 2009).

Topographically, the vast majority of the research filed is occupied by gently undulating limestone hills, which gradually ascend toward *Tor Rahum* (the Rahum Plateau) to the south or *Jabal Thulethowat* (Mt. Thulethowat) to the southeast. We divided it into the following three areas. Area 1 represents the northwestern skirts of the limestone hilly terrain. This area, ca. 450–600 m in elevation, contains numerous mesa-like hills protruding northwestward, which provide an ideal location for cairn fields. Area 2 corresponds to the upstream zone of Area 1, being characterized by gentle hills and '*awdiya* (plural of *wadi*) snaking through them. It is slightly higher than Area 1, being ca. 600–750 m in elevation. Although it is short of mesa-like, flat-topped hills common in Area 1, ridgelines with various orientations substitute for them. Area 3, on the other hand, refers

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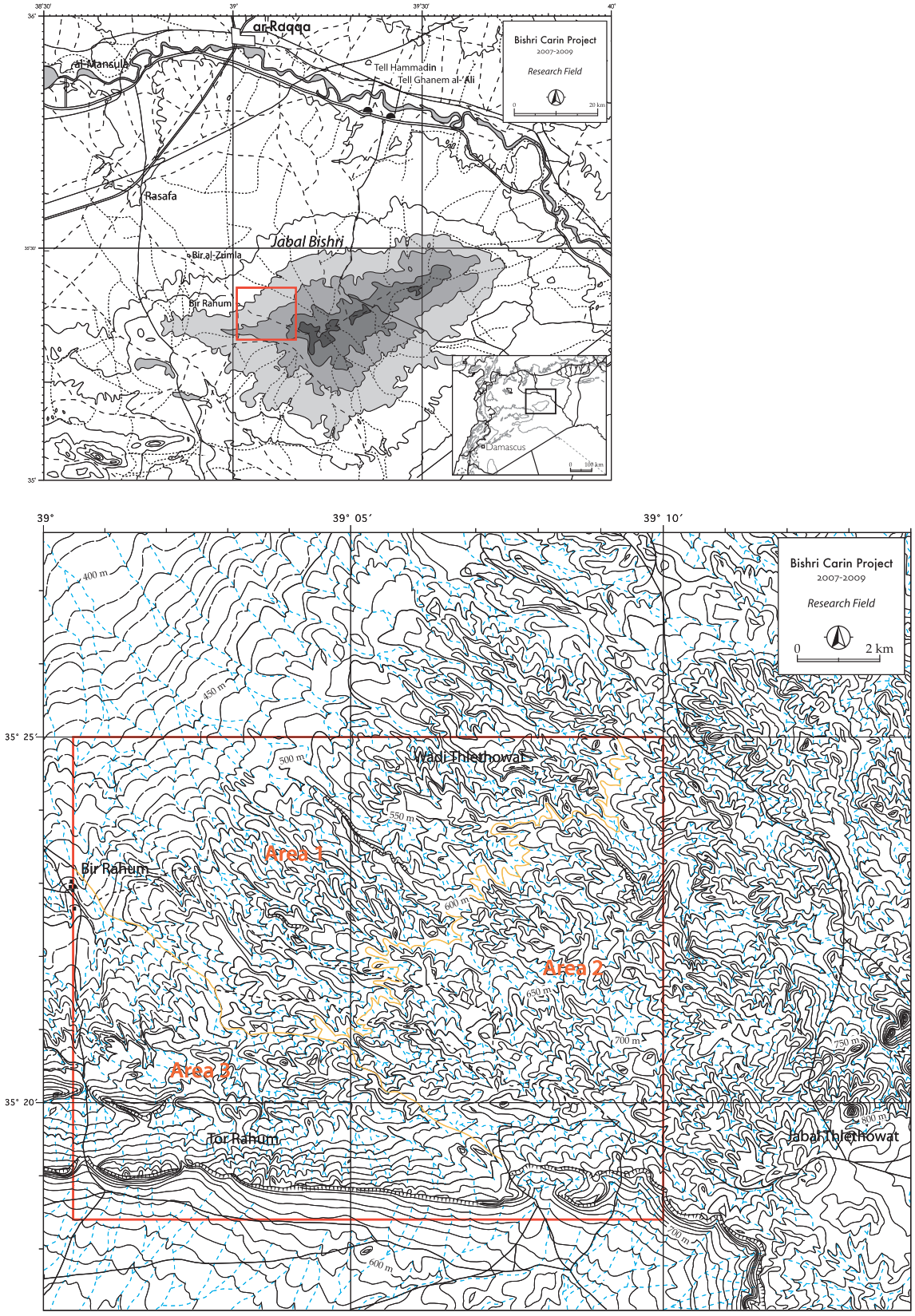


Fig. 1 Topographical map of the Bishri region (above) and the research area (below).

to the Rahum Plateau that covers the southwesterly one-third of the research field. This area, ranging from ca. 500 m to ca. 700 m in altitude, also includes erosional features suitable for the location of cairn fields. Unlike Areas 1 and 2, they are consistently oriented in parallel with the escarpment, namely, in the east-west direction.

3. General Survey

Our surveys focused on Areas 1 and 3; Area 2 was less intensively examined due to the difficulty in access and time constraints (Fujii 2008; Fujii and Adachi 2008; Fujii et al. 2009d, 2009e). To date, we have located 35 cairn fields or a total of 398 individual cairns (Fig. 2). When Area 3 is fully surveyed, the total number would be nearly five hundreds. The concentration of homogeneous burial cairns in such a limited area is suggestive of the involvement of a large group who shared the same ethno-cultural identity.

Most cairn fields extended in the east-to-west or northwest-to-southeast direction, following the general topography of each area. They occupied either an edge of a mesa-like, flat-topped hill or a ridgeline of a gentle hill, being rarely located on fluvial plains. This is probably because visibility from a distance was given the highest priority for the location of cairn fields. Another essential factor is the availability of construction material, which accounts for a close correlation between cairn fields and limestone outcrops. The reason why the two land features noted above were chosen of all locations is that they fulfill both of these two basal conditions.

Typologically, the Bishri Bronze Age cairn fields are characterized by their linear, intermittent development (Fig. 3). Cairns are usually aligned at an interval of ca. 100–300 m, thereby forming

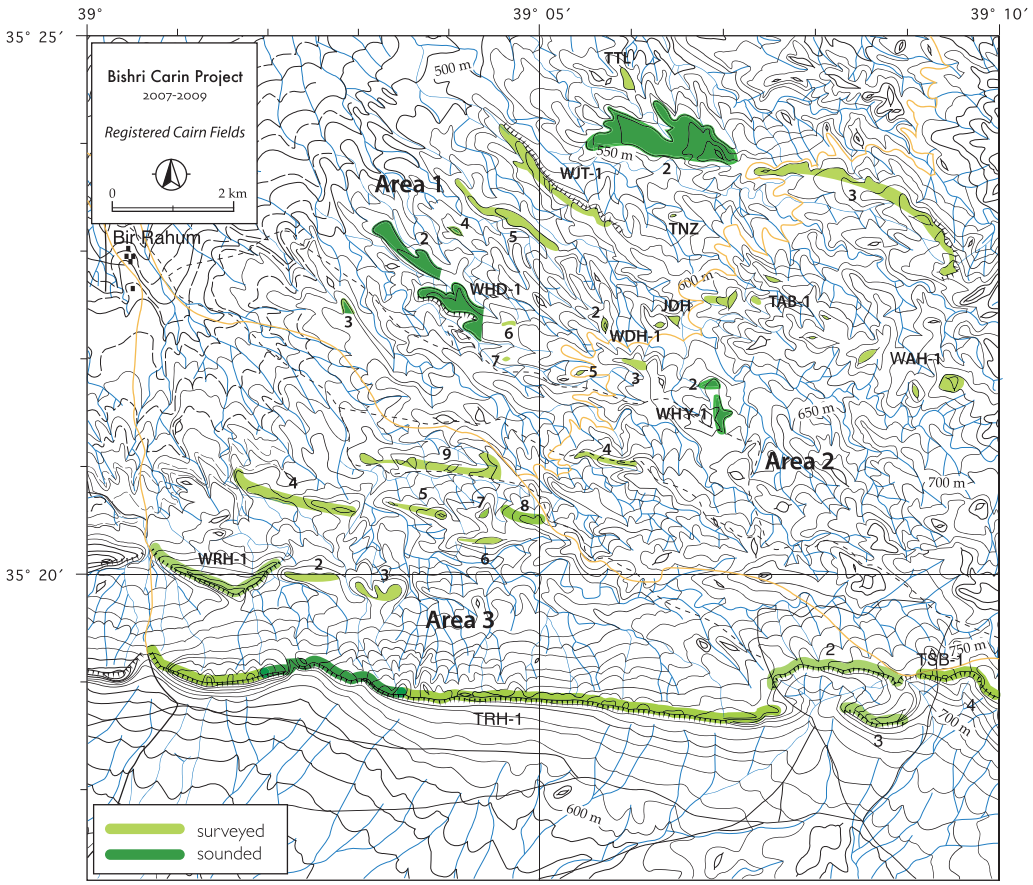


Fig. 2 Distribution of Bronze Age cairn fields in the research area.

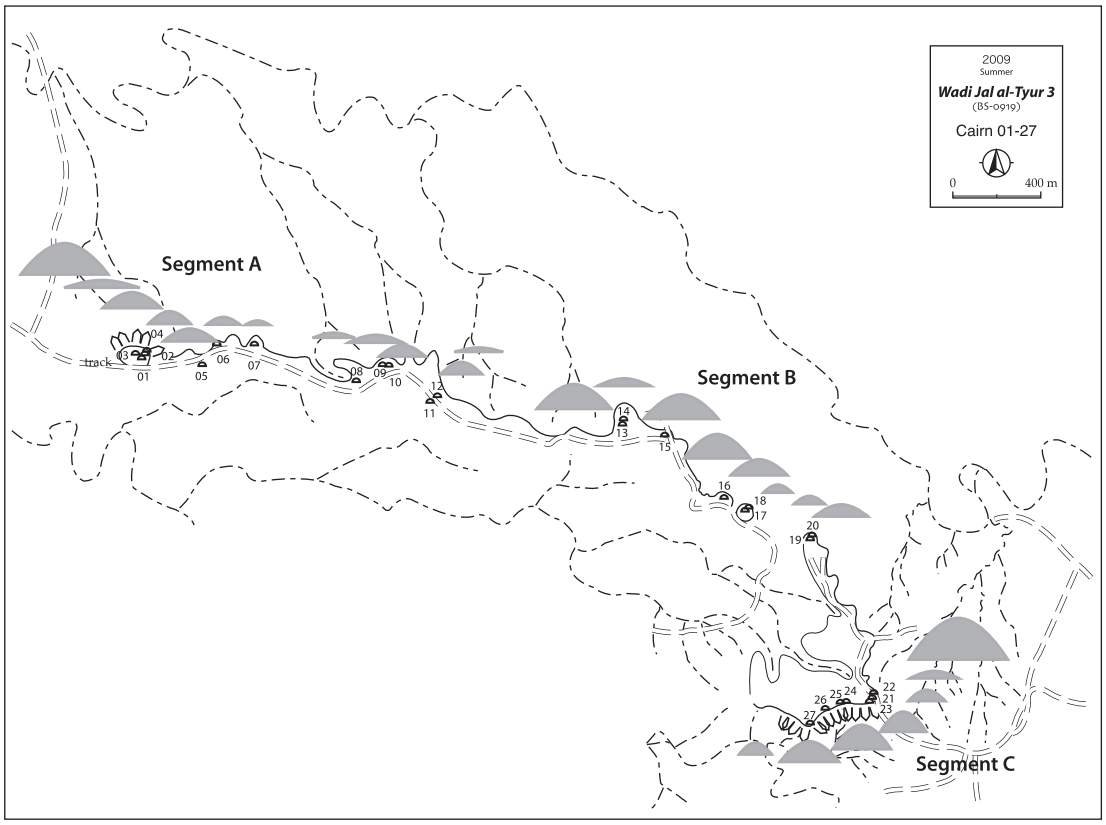


Fig. 3 Site map of Wadi Jal al-Tyur 3.

a loose continuum ca. 1–2 km in total length. The linear development may be a natural consequence of their location along an elongated hilltop or ridgeline, but the large interval is unique to the Bishri cairn fields. It is noteworthy that they follow the rule even when construction material is easily available between any two spaced-apart cairns. The reason for this inexplicable phenomenon is still unknown, but an ideological or psychological factor might have been involved in it. Anyhow, the linear, loose development is the norm of the Bishri Bronze Age cairn fields, differing substantially from contemporary cairn fields in the southern Levant and the Arabian Peninsula.

Another remarkable trait is the small scale of every cairn field. In comparison with Bronze Age cairn fields in the neighboring regions, the Bishri cairn fields are much smaller in scale and most examples consist of up to a dozen components. An elongated cairn field such as Tor Rahum 1 mentioned below is no exception to this. Our survey recorded a total of eighty-four cairns at the site, but they proved to fall into several contemporary segments consisting again of less than a dozen components. This means that the elongated site over ca. 8 km in total length was formed through the lateral connection of several contemporary segments ca. 1–2 km long respectively. Thus, it appears to be a reality that the Bishri cairn fields, though seemingly rambling in appearance, were in fact intensively constructed for a relatively short period. Excavated evidence mentioned below also supports this perspective.

4. Sondage at Wadi Hedaja 1

Our sondage took place at the following eight cairn fields: Wadi Hedaja 1–4 (Area 1), Wadi Jal at-Tyur 2 (Area 1), Wadi Hayuz 1–2 (Area 2), and Tor Rahum 1 (Area 3). Tested examples totaled 52, approximately one eighth of the registered cairns. For lack of space, we will only give an outline of the investigation results, focusing on the two major cairn fields, Wadi Hedaja 1 and Tor Rahum 1.

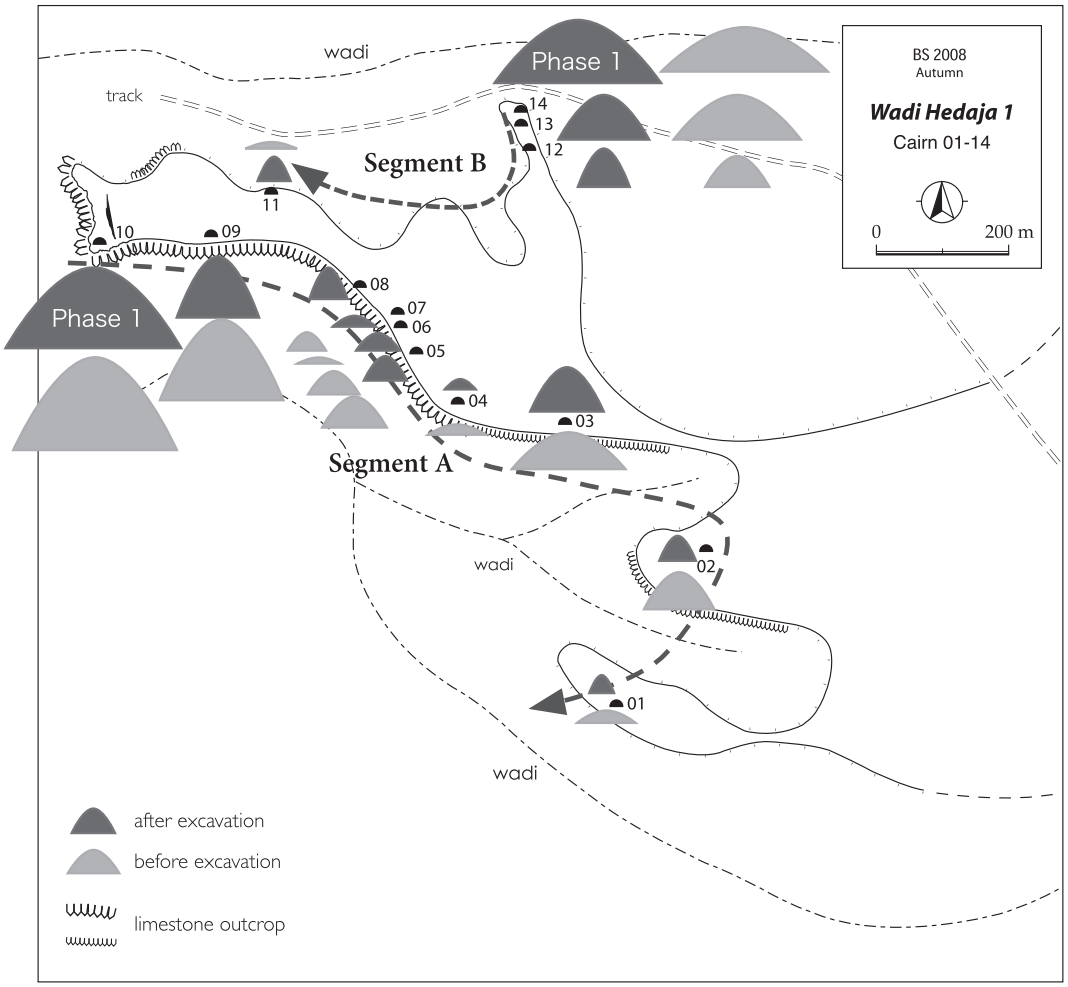


Fig. 4 Wadi Hedaja 1: site map.

The cairn field of Wadi Hedaja 1 (or WHD-1 in our site registration code) is located in the southern part of Area 1, occupying a flat top of a mesa-like hill protruding northwestward. It consisted of two cairn groups: Segment A and Segment B (Fig. 4). Segment A contained a total of ten cairns from BC-10 (i.e. Burial Cairn No. 10) to BC-01. They were arranged at a large interval along the southern edge of the flat-topped hill, forming a loose continuum ca. 1.5 km in total length. Segment B, on the other hand, consisted of four cairns from BC-14 to BC-11, which also formed a loose continuum ca. 0.6 km in total length along the northern edge. We tested all of the fourteen cairns to examine their inner structure (Fujii 2009; Fujii and Adachi 2009; Fujii et al. 2009a, 2009b).

The series of soundings revealed that: 1) the cairns were constructed with undressed or partly dressed limestone cobbles and boulders probably procured from neighboring limestone outcrops; 2) they are roughly round in general plan but varied in dimensions, measuring ca. 3–12 m in diameter and ca. 0.2–1.2 m in relative height; 3) the two largest cairns, BC-10 of Segment A and BC-14 of Segment B, occupied the distal ends of the hill, being followed by smaller cairns; 4) thus, both segments appear to have developed from the distal end toward the proximal part, following the horizontal stratigraphy; 5) the two large cairns incorporated a cruciform or oval cist, which was encompassed with a double or triple peripheral wall (Figs. 5, 6); 6) they were accompanied with small stone-built features such as an elongated boundary wall, U-shaped structures, and small stone concentrations, thereby forming a funerary complex; 7) smaller cairns, on the other hand, were usually devoid of peripheral walls as well as surrounding small features, consisting only of an oval, semi-

Fig. 5 Wadi Hedaja 1: general view of BC-10 (from SE).

subterranean cist and a cobble mound covering it.

Although most of the cairns were looted, larger cairns yielded a limited number of small finds that probably escaped from graverobbers' notice. They included snail and stone beads, bronze products, flint artifacts, and pottery sherds (Fig. 7: 1–6, 8, 11–13, 16–17). Of particular interest are a toggle pin from BC-09 and a short-necked small pot from BC-14 (Fig. 7: 1, 11), both of which are suggestive of a MBA (Middle Bronze Age) date for the two large cairns (Adachi 2008). In addition, human skeletal remains were recovered in a certain amount. Most of them were disarticulated, suggesting that the cairns were used for secondary interments (Nakano 2009a). Seeing that the cruciform cist of BC-10, for example, produced skeletal samples from at least a few individuals of various age, the Hedaja cairns are thought to have served as a family tomb rather than an individual grave.

The investigation also provided insights into the techno-typological sequence of the Hedaja burial cairns. Available evidence suggests that both segments began with the largest cairn at the distal ends and gradually developed either southeastward or westward, ending finally with the smallest cairn at the proximal parts. It appears that the sequence falls into the following three phases (Figs. 8, 9). The first phase or **Phase 1**, represented by the two largest cairns at the distal ends, is characterized by a combination of a large-scale cist and a double or triple peripheral wall encompassing it. BC-13 of Segment B may be defined as a transitional form between Phase 1 and Phase 2 in the sense that it is accompanied with a T-shaped cist but devoid of a peripheral wall. **Phase 2** contains the subsequent five cairns of Segment A (i.e. BC-09 to BC-05) and BC-12 of Segment B. This phase witnessed the disappearance of peripheral walls, the overall size reduction, and the typological convergence into an oval, semi-subterranean cist. Of significance is the gradual width reduction of a rubble-packed, corridor-like space between the inner and outer walls of a cist. In this light, Phase 2 may be further divided into the following three sub-phases: Phase 2a represented by BC-09 that is still equipped with a large cist and mound, Phase 2b represented by the three subsequent smaller

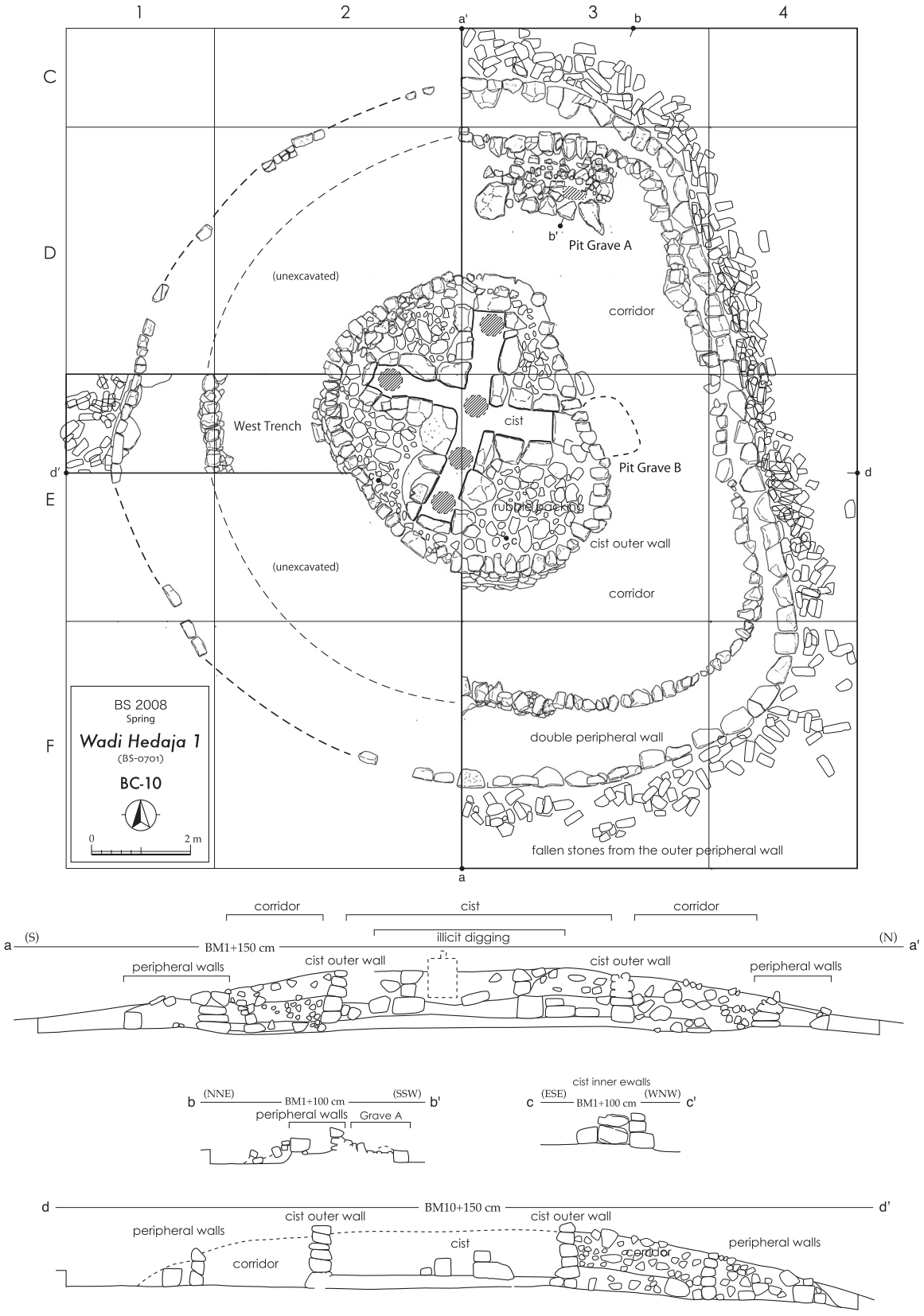


Fig. 6 Wadi Hedaja 1: plan and sections/elevations of BC-10.

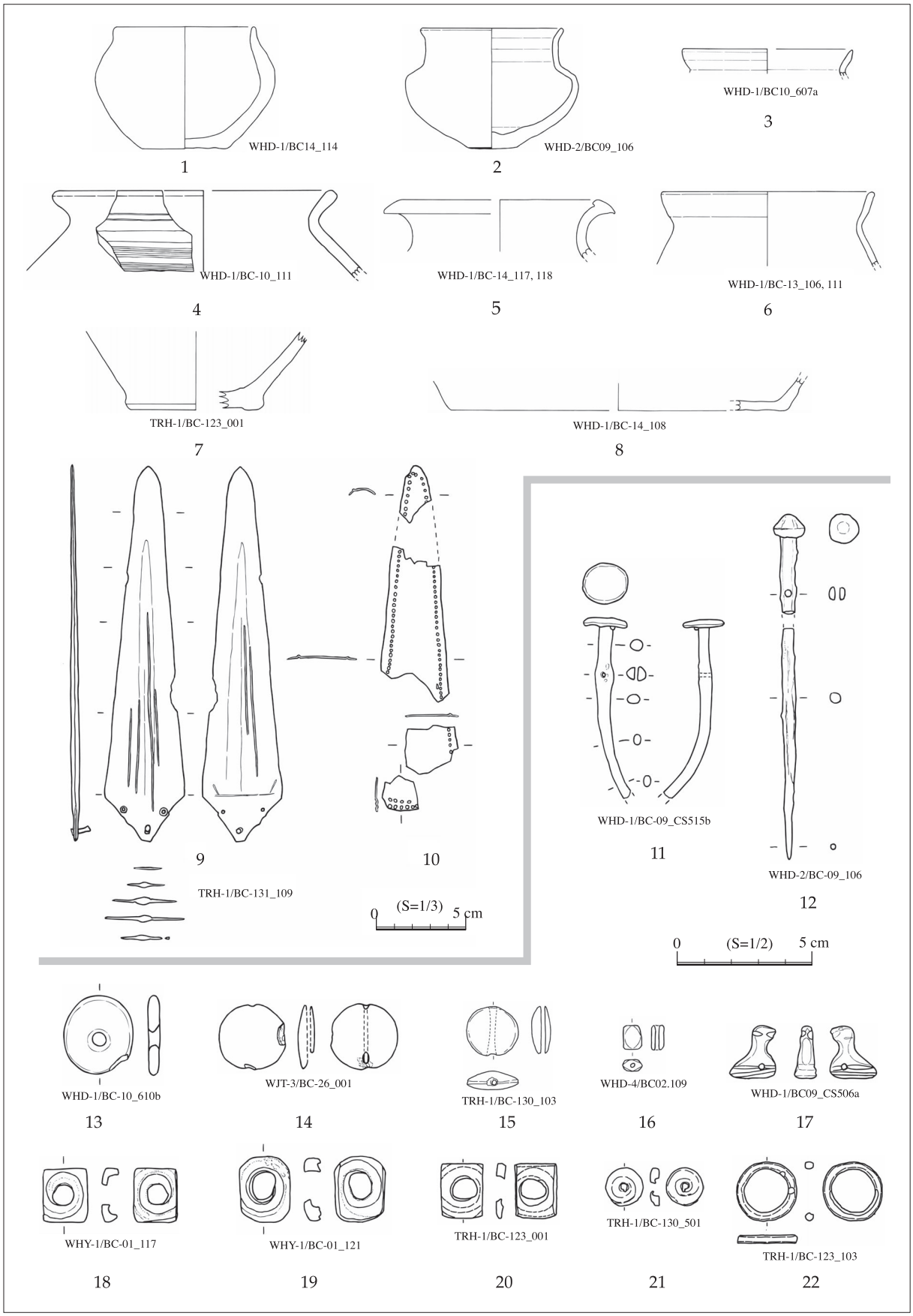


Fig. 7 Small finds from Bishri cairn fields.

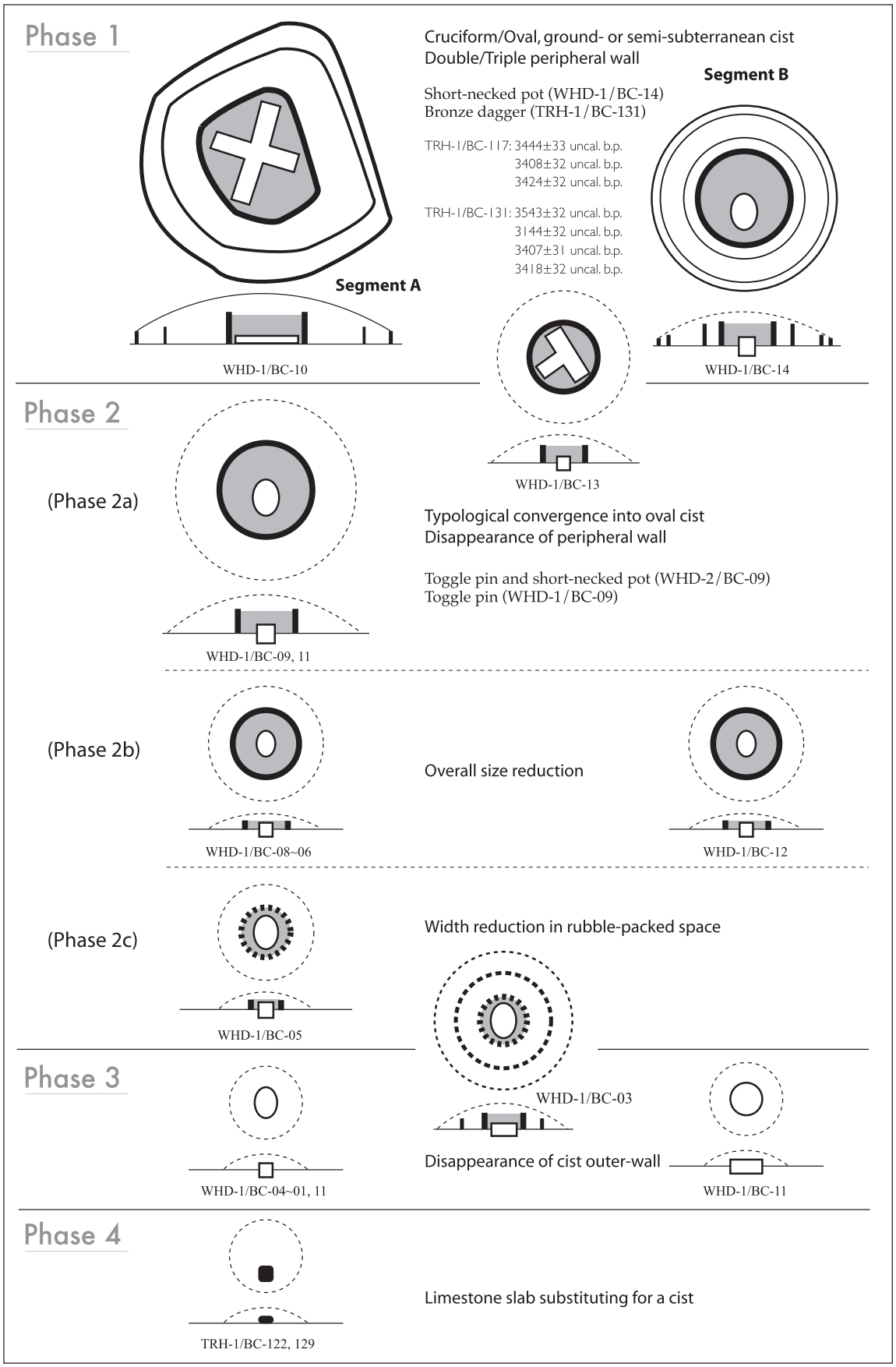


Fig. 8 Wadi Hedaja 1: techno-typological sequence of cairns.

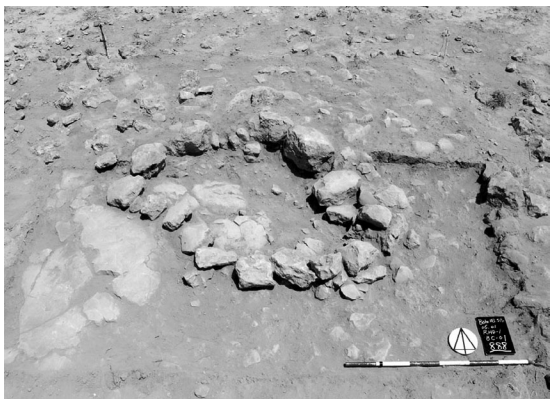
1. BC-09

2. BC-08

3. BC-06

4. BC-05

5. BC-02



6. BC-01

Fig. 9 Wadi Hedaja 1: cairns of Segment A.

cairns (BC-08 to BC-06), and Phase 2c exemplified by BC-05, a transitional form between Phase 2 and 3. BC-12 of Segment B falls into Phase 2b. **Phase 3** consists of the final four cairns of Segment A and BC-11 of Segment B. This phase saw further size reduction and typological simplification, and the rubble-packed corridor finally disappeared. As a result, with the only exception of BC-03, the cairns of this phase were reduced to a simple combination of a stone-lined pit grave and a small cobble mound covering it.

The two diagnostic finds referred to above suggest that Phase 1 and Phase 2 fall within the time range of the MBA, especially its first half. Phase 3 is thus far devoid of datable *in situ* finds, but there is little doubt that it directly follows Phase 2c and, therefore, still falls within the time

span of the MBA. The investigation at Wadi Hedaja 1 provided a basic framework to understand an overall picture of the Bishri Bronze Age cairn fields.

5. Sondage at Tor Rahum 1

In order to test the Hedaja sequence in a broader context, we moved southward to Area 3 and tested a total of eighteen cairns at Tor Rahum 1 (Fujii et al. 2009c). The investigation showed that the site consisted of several contemporary segments, and that every segment began with a large cairn of Phase 1 and ended with a small cairn of Phase 3 or 4 (Fig. 10) (Phase 4, newly identified at the site, substituted a large limestone slab put on the ground surface for a stone-line grave pit). Segment

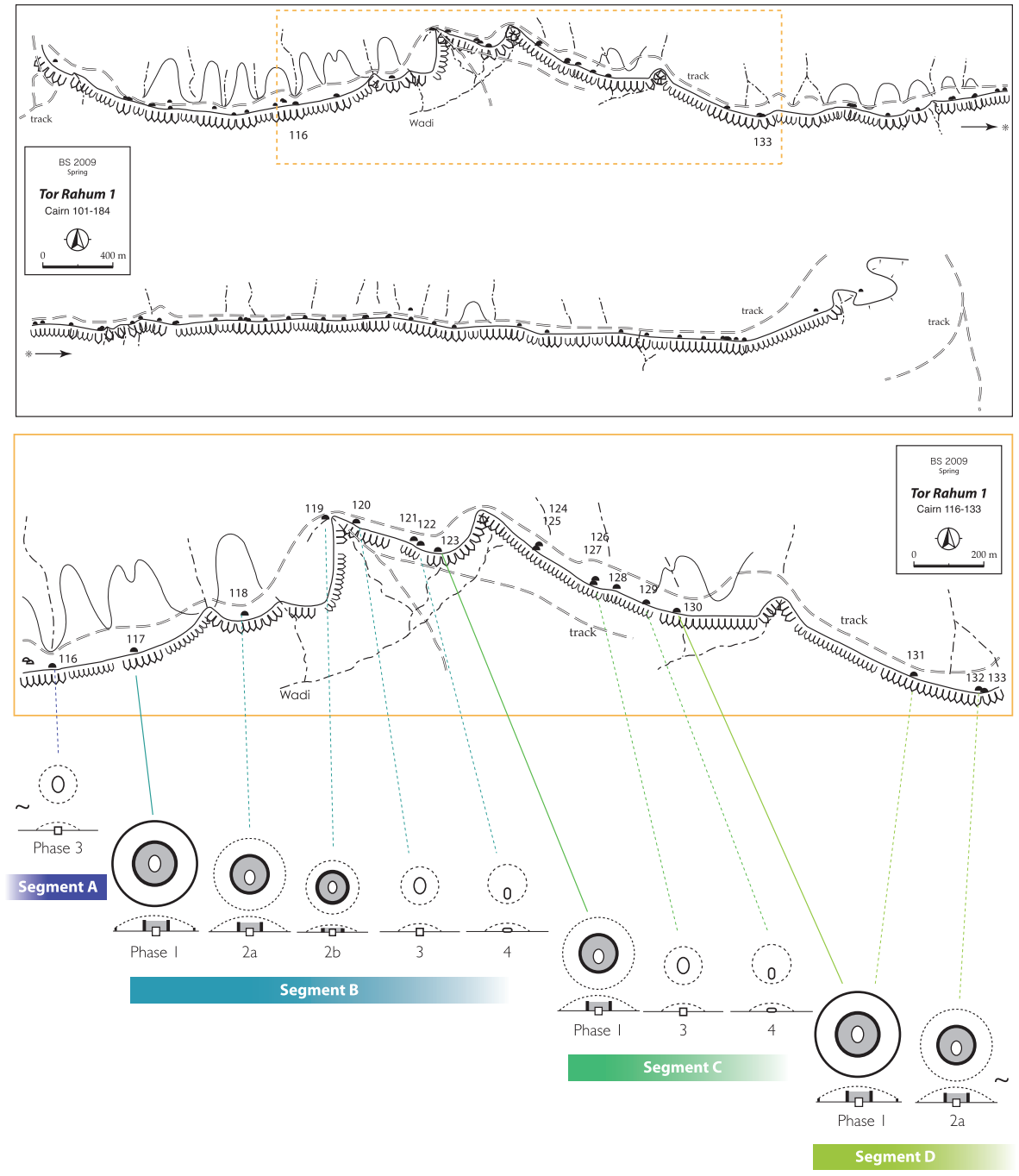
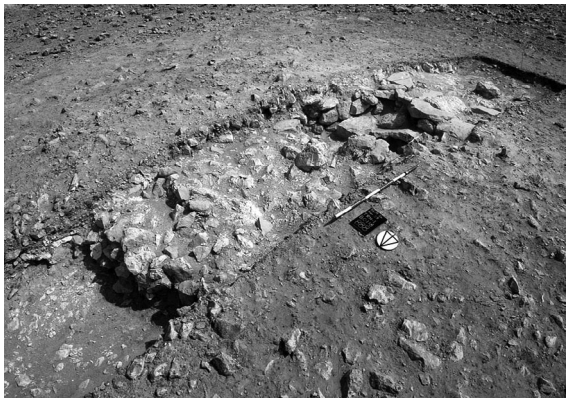


Fig. 10 Tor Rahum 1: site map and the techno-typological sequence of cairns.

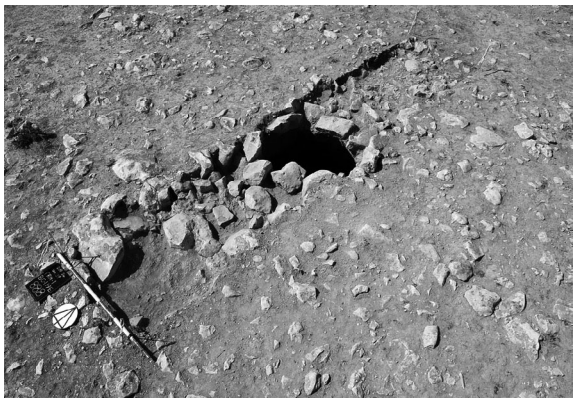
B, for example, contained a total of six cairns from Phase 1 to Phase 4 (Fig. 11).

Thus the site can also be understood within the framework of the Hedaja sequence and, therefore, can be dated to the MBA, especially its first half. Further evidence for the dating comes from a bronze dagger and sheath from BC-131, the second component of Segment D (Fig. 7: 9, 10; Fig. 12). The dagger falls into "Type 30" of Phillip's synthesis (1989: 132), which is typical of the MBI hoard of Byblos (Dunand 1954). Parallel examples are also found at a few terminal EBA sites such as Halawa (Orthmann 1981: Tafel 63: 38) and Tawi (Kampschulte and Orth 1984: Tafel 31B: 3). Thus we shall be allowed to date it around the MBI (Adachi and Fujii 2010b). A series of C-14 dates from BC-117 and BC-131 also falls roughly within the time range (Nakamura in this text).

1. BC-117



2. BC-118



3. BC-119

4. BC-120

5. BC-121

6. BC-122

Fig. 11 Tor Rahum 1: cairns of Segment B.

6. Summary and Discussion

Fig. 12 Tor Rahum 1: bronze dagger and sheath from BC-131.

The investigations shed new light on the hitherto poorly known cultural entity behind the Middle Euphrates urbano-farming communities. To conclude, we will briefly review the investigation results, focusing on the date, social background, and archaeological implications of the Bishri Bronze Age cairn fields.

The first issue is still debatable in part, but we can now refer to the Hedaja/Rahum sequence. Although the scarcity of datable *in situ* finds makes it difficult to date individual phases, several diagnostic artifacts - the toggle pin from WHD-1/BC-09 (i.e. BC-09 of Wadi Hedaja 1), the short-necked small pot from WHD-1/BC-14, the bronze dagger from TRH-1/ BC-131, and a toggle-pin and a short-necked small pot from WHD-2/BC-09 (Fig. 7: 2, 12) - suggest a MB I date for Phase 1 and Phase 2a of the sequence (Fig. 13). The series of C-14 dates and typological comparisons of snail and stone beads (Fig. 7: 13–22) also support the dating (Adachi and Fujii 2009, 2010a). Seeing that every segment consists of up to a dozen cairns, it is tentatively concluded that the Bishri cairn fields lasted for a few centuries in the first half of the MBA.

The second issue is less troublesome. A line of collateral evidence – the arid environment, the total absence of contemporary settlement sites in the research field, the predominance of secondary burial, the scarcity of burial gifts (especially of potteries), and, instead, the concentration on small adornments – is suggestive of the involvement of mobile groups rather than sedentary populations. Of particular significance is the anthropological observation that lower limb bones of buried individuals were well-developed in comparison with their upper limb bones, which strongly suggests that walking occupied the major part of their life (Nakano 2009b; Nakano and Ishida in this text). We should also note that the burial practice in the Bishri region is quite different in nature from that in the neighboring urbano-farming communities (Cooper 2006). There is little doubt that local pastoral nomads were concerned with the construction and operation of the Bishri cairn fields.

What, then, do these basal perspectives mean in a broader context? One thing we can say is that the Bishri cairn fields may represent a cemetery of *Mar-tu/Amurru*, since they buried a large group of Bronze Age pastoral nomads who based themselves in Mt. Bishri and none other. It should be noted, however, that our evidence focuses exclusively on MBA pastoral nomads and includes no EBA mobile populations. Noticeable in this regard is the finding of EBA cairns at Tell Shabbut (Numoto 2009; Kume and Numoto 2009a, 2009b; Numoto and Kume in this text) and Wadi ‘Ain West (Kadowaki et al. 2008; Nishiaki et al. 2009; Nishiaki in this text), which might imply that the 3rd millennium *Mar-tu/Amurru* focused on the edge of the Middle Euphrates lowlands rather than the Bishri highlands. Given this, it follows that the Bishri cairn fields represent a cemetery of their descendants probably related to the 2nd millennium Mari.

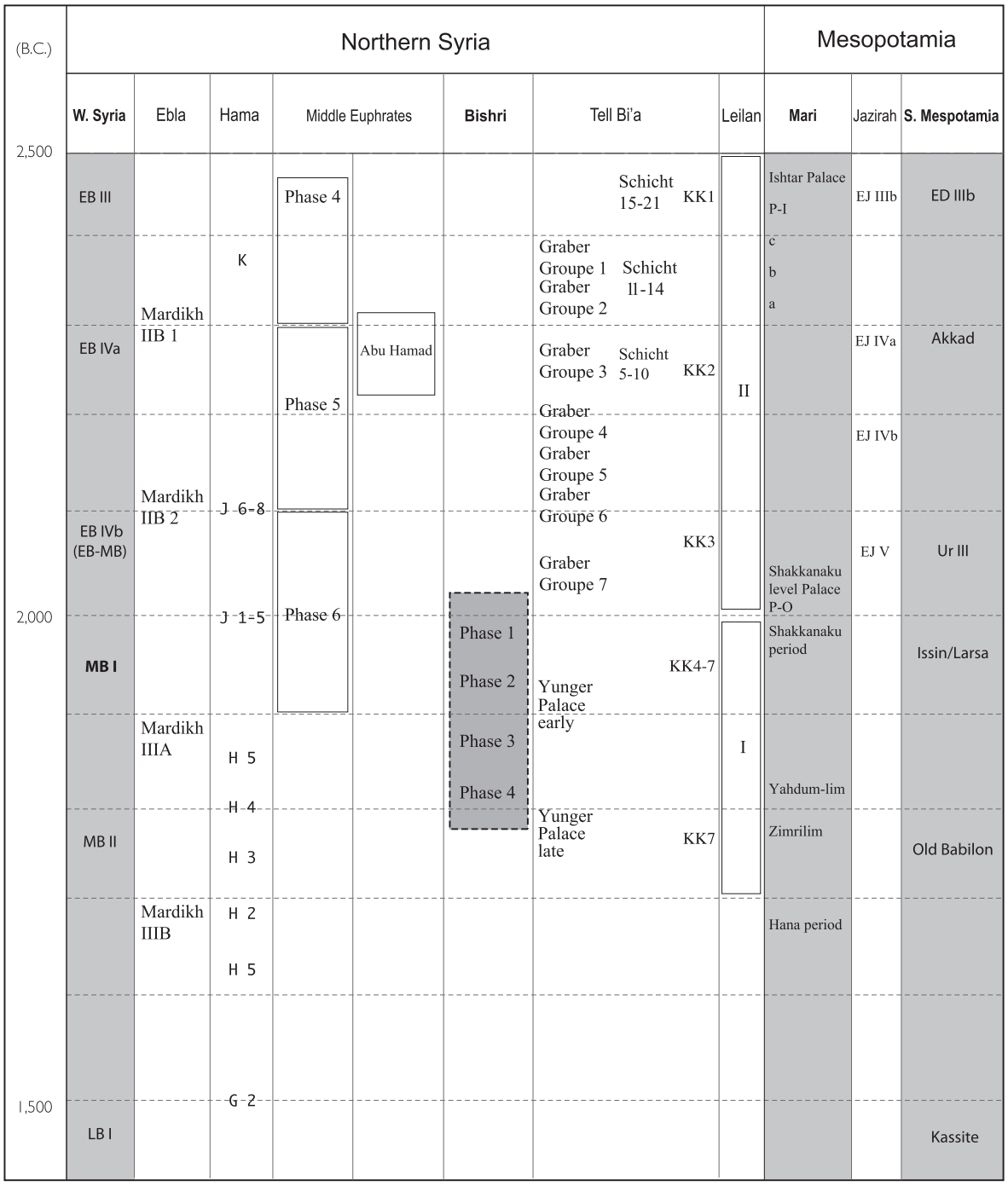


Fig. 13 Tentative chronology of the Bishri Bronze Age cairn fields (based on Akkermans and Schwartz 2003 for West Syria and Ebla; Riis and Buhl 2007 for Hama; Cooper 2006 for Middle Euphrates; Einwag 1998; Hemplemann 2000 and Pons 2001 for Tell Bi'a; Weiss 1990 for Leilan; Lebeau 2000 for Jazirah).

7. Concluding Remarks

The series of investigations has enabled us to specify the archaeological footprints of Bronze Age pastoral nomads who lived in the southern hinterland of the Middle Euphrates urbano-farming communities. It is now evident that the northwestern flank of Mt. Bishri served as a funerary center for a large group of MBA pastoral nomads. Comparative studies of burial gifts suggest that their trade network or, possibly, their seasonal mobile range covered a widespread area spanning from

the Middle Euphrates River Basin to south Mesopotamia probably via Mari. A large group of MBA pastoral nomads who was based in the Bishri Range and, at the same time, closely related to the neighboring urban societies – we shall be allowed to define them as a branch of the 2nd millennium *Mar-tu/Amurru* related to the contemporary Mari Kingdom. Nevertheless, our research project has just started and further investigation is needed to validate our challenging perspective.

Acknowledgements

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ETHNO-ARCHAEOLOGICAL RESEARCH ON THE MODERN CEMETERIES OF GHANEM AL-ALI VILLAGE

Akira TSUNEKI*

Tell Ghanem al-Ali has been one of the focuses of the Syro-Japanese archaeological project to Jabal Bishri since 2007. This Early Bronze Age settlement is located just northeast of a modern village of the same name. The top of the mound is covered with the modern graves of the Islamic villagers. In addition to the mound top cemetery, the Ghanem al-Ali villagers have other four cemeteries within the village itself. Therefore, these cemeteries give us the opportunity to study human relations considered integral to research in archaeology. In order to understand this relationship, I started to gather information from the villagers about the history of Ghanem al-Ali village in 2007 (Tsuneki 2008). Based on this information, a field survey of the modern cemeteries was carried out in May, 2009. This paper is the result of this study.

1. Ghanem al-Ali Villagers

The location and the basic data of Ghanem al-Ali village was reported in another article (Tsuneki ibid.). Here, I only summarize important data for studying the human relations. The number of the present villagers of Ghanem al-Ali I is around 10,000, and all of the villagers belong to Bu-Shaba'an *Qabila* and al-Subeat *Ashira*. Therefore, they belong to the same human groups on a tribal level. However, *Ashira* can be divided into ten *Aila*s based on the lineages. Fig. 1 shows the lineages of the modern Ghanem al-Ali villagers.

Ghanem al-Ali, the original ancestor of the villagers, had five sons; Mohsen, Diab, Mohamad, Fsein, and Ajil. Each son had his own sons as follows.

Mohsen; al-Qoran
Diab; Hameidat, al-Kalash, al-Qoran
Mohamad; Hamad al-Ali
Fsein; al-Habib, al-Mardouf, Halaf-Abdoula
Ajil; al-Shabhar

The descendants of the eight sons, excepting those of al-Qoran of Mohsen, have continued to live together and consist of the basic big families (*aila*), in the former and present Ghanem al-Ali village.

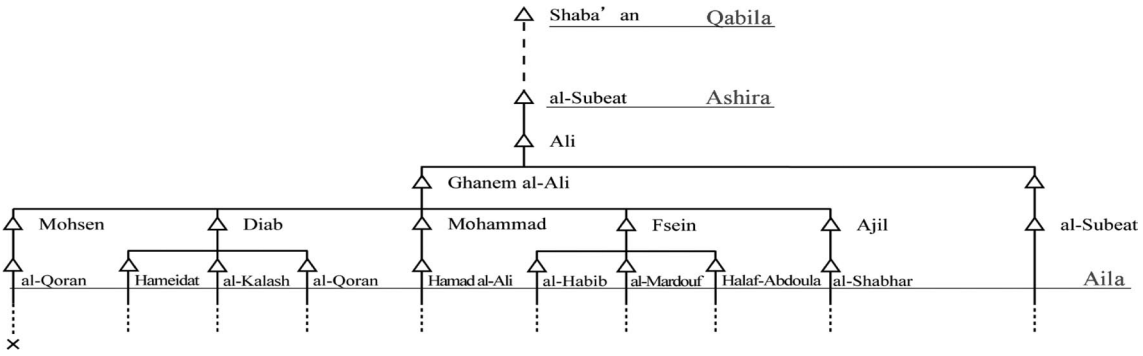

Fig. 1 Lineages of Ghanem al-Ali villagers.

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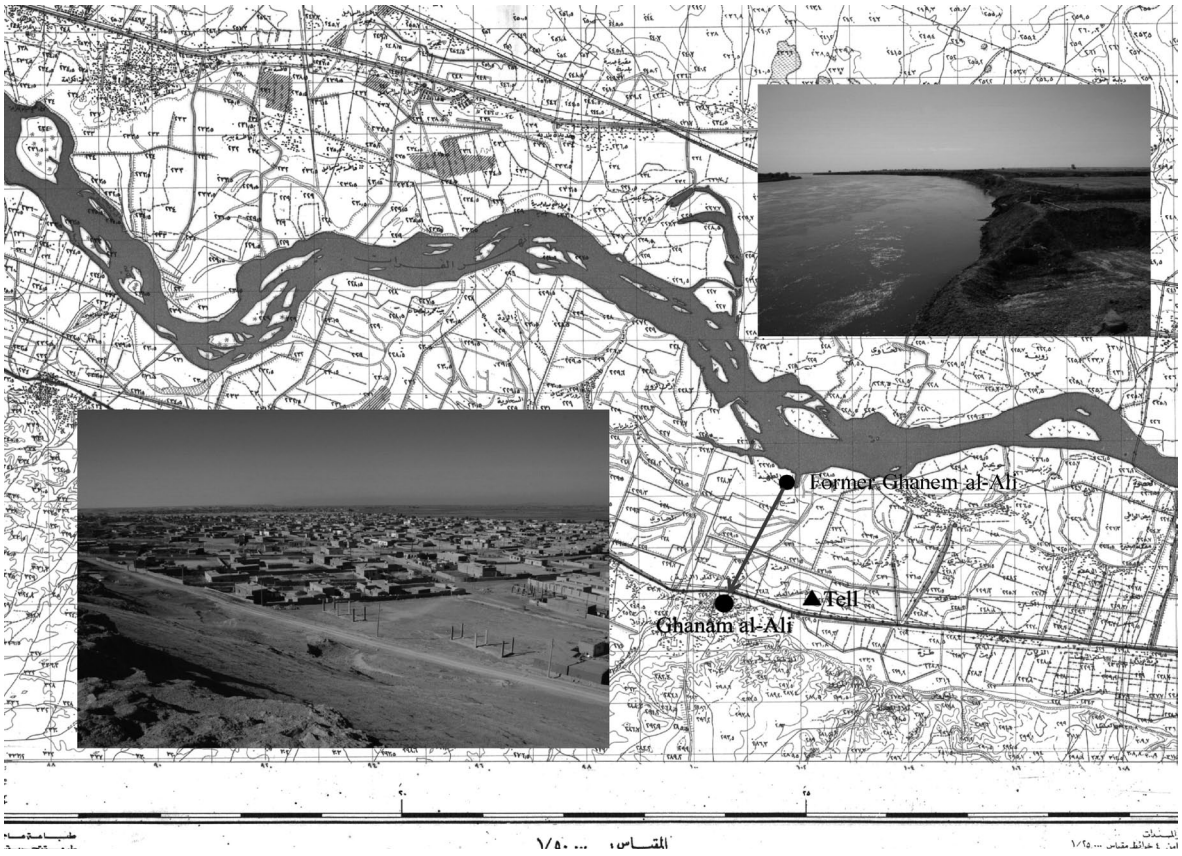

Fig. 2 Locations of the former and present Ghanem al-Ali villages.

Their former small village was located along the Euphrates river, about 2 km north of the modern village, and the villagers used Tell Ghanem al-Ali as their graveyard since this period. This former riverside village was severely damaged by flood in 1947, and the people decided to move to the present place near a cliff on the river terrace (Fig. 2). Therefore, the modern Ghanem al-Ali village has been inhabited since 1947. The people of Al-Subeat, another big family, started to inhabit the village from that time. Before 1947, they inhabited another small riverside village set apart from the former Ghanem al-Ali village. They are not direct descendants of Ghanem al-Ali, although their ancestor was a brother of Ghanem al-Ali.

2. Residential Areas

Therefore, we can recognize nine big families in the present Ghanem al-Ali village structure. The distinction of big families may affect the daily life of the villagers, i.e., residential areas, marital relations, and location of cemeteries. Fig. 3 shows the residential area of each big family.

Each big family shares different areas within the village. The population of al-Shabhar *aila* is small (only a few households), and they were excluded from this study. Though a small family, the Al-Shabhar family is respected by other villagers, because of their previous service as local judges called *Mhtar*. Two *Mhtar* graves were constructed on the cliff behind the village with a fine view. The supra-*aila*s (Mohsen, Diab, Mohamad, Fsein Ajil) also affect the residential system. For example, the descendants of Fsein, i.e., al-Habib, al-Mardouf and Halaf-Abdoula, share neighboring areas in the northwestern part of the village. The people of al-Subeat, the sole big family originating from non-direct brotherly descendants and which joined Ghanem al-Ali later, share the western edge of the village near Wadi Harar. The division of residential area based on *aila* has been strictly kept

since the beginning of the village, and each residential area has extended from the north-central part of the village. Some *aila*s like Hameidat and al-Qoran moved into a detached block beyond their original residential areas, because their population increased.

3. Modern Cemeteries

The *aila* distinction affected not only the residential system, but also the cemetery system. Five cemeteries have been used by the Ghanem al-Ali villagers (Fig. 3). A Quick Bird space image taken on April 28, 2009 was used to analyze the location of each grave in the cemeteries.

Cemetery 1: It is constructed on the surface of Tell Ghanem al-Ali, and it is the largest and oldest cemetery of the villagers, consisting of over one thousand graves (Fig. 3, 4). The accurate number of graves is difficult to determine because some old graves are weathered and their gravestones fallen and destroyed.

The villagers believe that this cemetery was begun by the construction of a grave for a *sheikh*, named Mohanmad al-Shoukh, on top of the mound. His grave was encircled by a stone wall with the grave of his son, Ahamad al-Shoukh. They belong to the Hamad al-Ali *aila*. Seven such encircled *sheikh*'s graves are visible on the top of the mound (Fig. 5). Two in the east belong to the Hamad al-Ali *aila*, and four in the west belong to Mardouf *aila*. These *sheikh*'s graves were worshipped and believed to provide folk remedies. The villagers come here to pray for cures.

The graveyard has been extended around these *sheikh*'s graves. Therefore, the older graves are situated nearer the center of the cemetery. Most of the gravestones of old graves utilized gypsum-rocks, and they lack epitaphs. Therefore, we cannot check the name of the dead and his/her date of death. The graves in the periphery of the cemetery are newer, and most of them have a gravestone with epitaph. The oldest date on an epitaph is 1937, which was engraved on a re-built gravestone

Fig. 3 Map showing the residential area for each big family at Ghanem Ali village and the locations of five modern cemeteries.

Fig. 4 View of Cemetery 1.

Fig. 5 One of the *Sheikh*s' graves (Ahamad al-Shoukh, Hamad al-Ali *aila*) at Cemetery 1.

on the mid-slope of the mound in the northwestern part of the cemetery (Hameidat block). It is clear that this cemetery has been used much before the establishment of the modern Ghanem al-Ali village. Though we encountered a gravestone with a 1949 marker, most of the old gravestones with epitaphs are markers from the 1960's. The number of graves in Cemetery 1 seems to decrease from the 1970s, because the villagers began to construct their cemeteries inside the village. However, some families continue to use Cemetery 1. They wanted to go to their final resting place with their

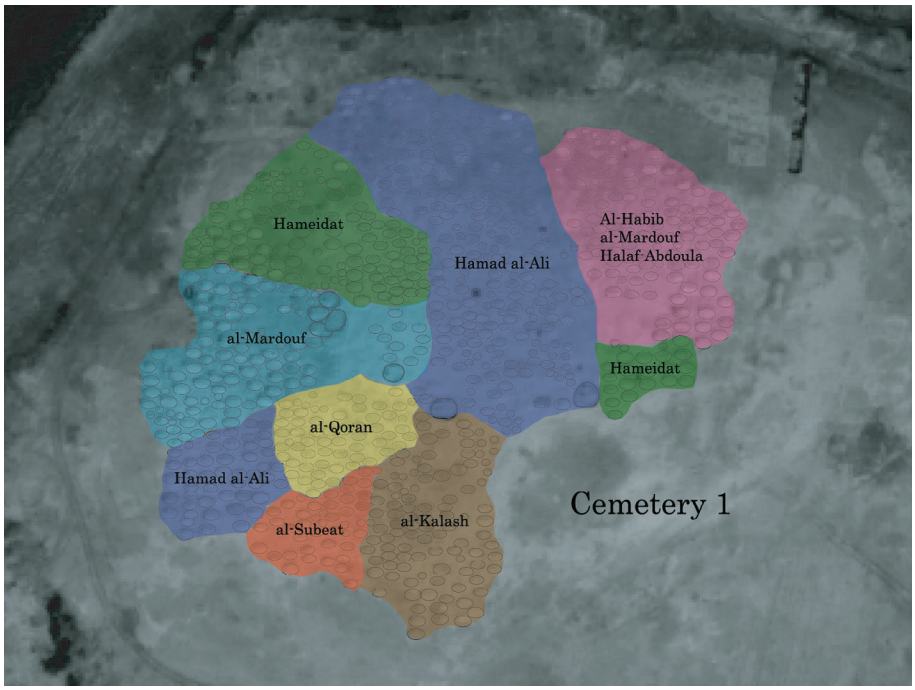

Fig. 6 Cemetery 1. The graveyard of each big family is shown in a different color.

Fig. 7 View of Cemetery 2.

grandfathers and fathers. So, we encounter newer graves, especially in the periphery of the cemetery. Based on the epitaphs of the gravestones and villagers' information, each big family (*aila*) shared a different area of the Cemetery 1 (Fig. 6). The regulation and location of graves for each big family has been kept since the beginning of the cemetery.

Cemetery 2: This cemetery is located on the right bank of Wadi Harar, west of the al-Subeat residential area (Fig. 3, 7). It was constructed for the al-Subeat *aila* in the beginning of 1970s.

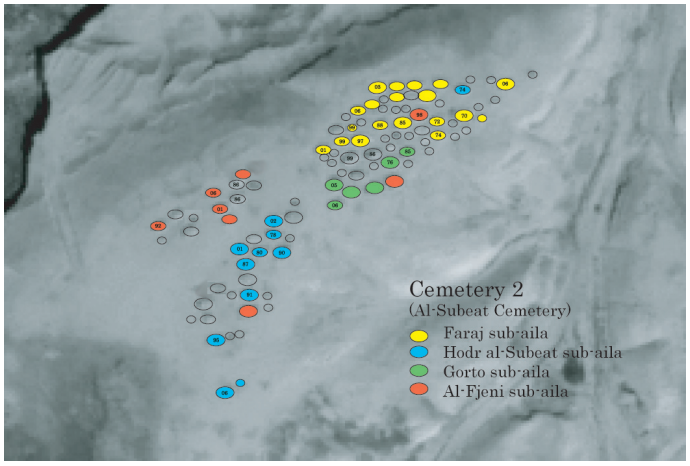

Fig. 8 Schematic plan of Cemetery 2.

Fig. 9 Examples of newer type gravestones made of concrete visible in Cemetery 2.

There are about one hundred burials in this cemetery, and all of the graves belong to the al-Subeat *aila*. This *aila* can be divided into four sub-*aila*s; Faraj, Hodr al-Subeat, Gorto and al-Fjeini. These sub-*aila* divisions are related to grave location. The graves of Faraj sub-*aila* are located in the northwestern part of the cemetery, with the graves of Gorto sub-*aila*. Hodr al-Subeat sub-*aila* shares the southwestern part, and al-Fjeni sub-*aila* shares the northwestern part. There are small vacant lots between these three blocks (Fig. 8). As inter-marriage happens frequently between these sub-*aila*s, we observed that some brides had graves in each block.

Though the grave location of each sub-*aila* has been kept we cannot observe any conformity among the gravestone types. Many types of gravestone were used in this cemetery. Though the older type was a simple gypsum stela, newer types of gravestone have been made of concrete (Fig. 9). Many new type gravestones were used for all sub-*aila*s in this cemetery. In other words, I cannot point out any clear relationship between gravestone types and sub-*aila*s. This is also the case in other cemeteries of Ghanem al-Ali. Nowadays, people buy the gravestone from the gravestone factories, and each factory makes its own type of gravestone (*shahida*). The difference in gravestone types depends on the factory, and it is not related to *aila*s.

Cemetery 3: Cemetery 3 consists of about 150 burials. It is located in the western part of the village, at the junction of the residential blocks of al-Habib, Halaf-Abdoula, and Hameidat *aila*s (Fig. 3, 10). It is located on a small natural hill, and this hill has been used as cemetery for the descendants of Fsein, i.e., al-Habib, Halaf-Abdoula and Mardouf *aila*s, since the middle of the 1970s. The very close relationship between these three *aila*s can be seen not only in residential locations, but also in the cemetery system. They always share the same location in Cemetery 1 and Cemetery 3. Though the locations within the cemetery can be roughly divided, they are intermixed (Fig. 11). The first

Fig. 10 View of Cemetery 3.

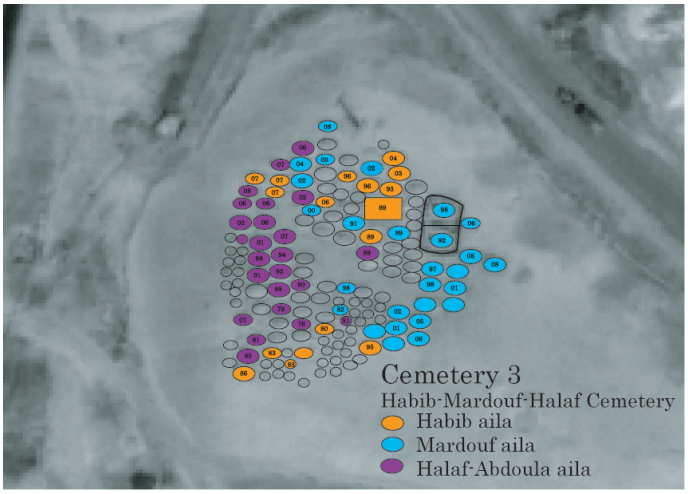

Fig. 11 Schematic plan of Cemetery 3.

1. Simple grave mounds

2. Enclosure graves

3. Concrete grave

Fig. 12 1. Simple mound graves, 2. Enclosed graves, 3. Concrete graves.

Fig. 13 View of Cemetery 4.

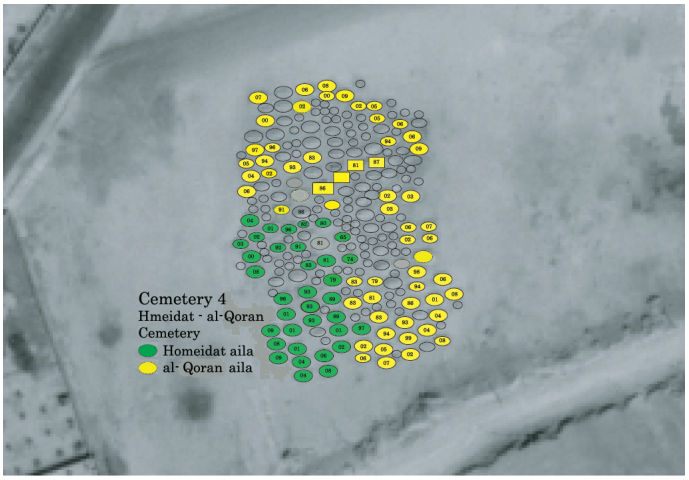

Fig. 14 Schematic plan of Cemetery 4.

burial in Cemetery 3 is a grave of Halaf Mohamad Habib (Halaf-Abdoula *aila*) on the top of the hill. His passing year is 1976 and after his burial the cemetery extended from the hilltop toward the foot.

Most graves are simple mounds (Fig. 12-1). However, there are two graves enclosed by stone and block walls (Fig. 12-2) and one grave made of square-shaped concrete (Fig. 12-3). The former graves, dug in 1992 and 1998, belong to Mardouf *aila* and the latter one, consigned in 1989, belongs to Habib *aila*. They were not the progenitors or founders of these *aila*s, but rich persons of influence.

Cemetery 4: It is located below the cliff of the Euphrates river bank, at the southern junction of Hameidat and al-Qoran residential areas (Fig. 3, 13). Cemetery 4 has been used by these two big families. Both of them are descendants of the Diab supra-*aila*. The first grave of the Hameidat is that of Fsein Ali Hameidat, who died in 1965. His grave is located at the center of the cemetery.

Fig. 15 View of Cemetery 5.

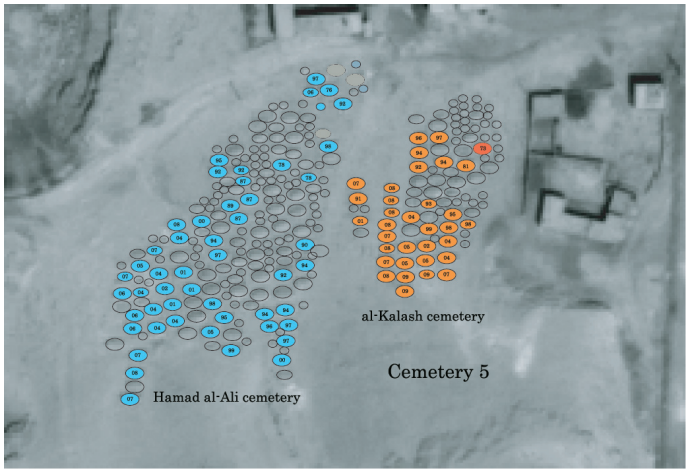

Fig. 16 Schematic plan of Cemetery 5.

The first grave of the al-Qoran group is that of Halaf al-Salem, dug in 1973. From then until the present about 300 people were buried in this cemetery. The graveyard location of each *aila* is relatively well defined. The Homeidat graves share the southwestern part of the cemetery, and the al-Qoran graves were located in the rest of the cemetery (Fig. 14). In other words, they constructed their graves in a location nearer their residential blocks. Four square-shaped concrete-made graves were constructed in the al-Qoran block. These are graves belonging to the same rich family.

Cemetery 5: It is also located below a cliff on the Euphrates river bank (Fig. 3, 15). It has been constructed near Wadi Ges, at the junction of Hamad al-Ali and al-Kalash *aila*s' residential areas. This cemetery has been for these two *aila*s. However, these two big families do not belong to the same supra-*aila*. Hamad al-Ali was the son of Mohamad, and al-Kalash was the son of Diab. This division strictly reflects the cemetery structure. A small wadi divides this cemetery into two graveyard blocks

(Fig. 16). The western bank has been used as a graveyard for Hamad al-Ali, and the eastern bank for that of al-Kalash. Curiously enough, these graveyard locations are in reverse to the residential areas of two big families. Each *aila* made its own cemetery beyond its residential area. It is better to understand that there are two independent cemeteries in Cemetery 5.

Al-Kalash cemetery consists of about one hundred graves. The first grave in this cemetery is that of Ahamad Seid Hamadi, who died in 1973. It is located in the northeastern part of the block. The older graves are located in this part. Therefore, al-Kalash cemetery started from the northeastern part, then, extended southwest toward the wadi. Hamad al-Ali cemetery consists of over two hundred graves. The first grave was constructed for Abdo al-Dahil in 1976. It is located in the northernmost area of their cemetery. Old graves are visible in this area. Then, the cemetery extended southwest, continuing up the slope.

4. Some Remarks

Ethno-archaeological study of the modern cemeteries of Ghanem al-Ali village gives us an opportunity to consider the relationship between material cultures and human groups.

Grave locality and human groups

In general, we observe that grave location reflects the relationship of human groups relatively well. Let us review the five cemeteries of Ghanem al-Ali. We can observe a strict space division system based on *aila*s in Cemetery 1 (Fig. 6). The system is very similar to that of residential areas. The peripheric character of the location of Cemetery 2 directly reflects the situation of the al-Subeat *aila*, i.e. non direct descendants of Ghanem al-Ali (Fig. 3). The intermixed character of Cemetery 3 reflects the close kinship and immediate relations between three *aila*s, which have the same supra-*aila* (Fig. 11). The reason for such close relationship is probably due to the small population size of these *aila*s. They have tried to connect through marriages within their supra-*aila* in order to maintain an appropriate population size. Cemetery 4 reflects the relatively large-sized *aila* groups (Fig. 14). Two *aila*s, having the same supra-*aila*, in this cemetery can survive through marriages within its own *aila*. They constructed the cemetery together, but the locations of each big family's graves have not been intermixed much. Cemetery 5 reflects two independent *aila*s (Fig. 16). Their supra-*aila*s are different, and their graveyards have never been intermixed.

Grave types and human groups

Concerning grave figures, we can observe three basic types in the Ghanem al-Ali village cemeteries (see Fig. 12); 1) simple grave mound, 2) grave with a stone or block enclosure, and 3) concrete-made grave. In numbers, the simple grave mound is highly predominant. However, there are some enclosure graves and concrete-made graves in the cemeteries. The seven encircled graves on the summit of Tell Ghanem al-Ali (Cemetery 1) are *sheikh*'s graves. They were also the progenitors of each *aila*s. On the other hand, two enclosed graves in Cemetery 3 are those of rich persons of influence, and they were constructed in the 1990s. The square-shaped concrete-made graves in Cemetery 3 and 4 are those of rich persons. Therefore, we can conclude that some special types of graves are those of persons of influence in each human group.

There are various kinds of gravestones in the Ghanem al-Ali cemeteries. Almost all of the graves have two gravestones. One is a headstone and the other is a footstone. Until the 1970s, most of the gravestones were stela made of gypsum-rock, or merely a pile of gypsum-rocks. They were replaced by concrete-made gravestones from the middle of the 1970s, though stelae have been continuously used by some rich people. Owing to the existence of concrete, the gravestones included various figures and are colorful (see Fig. 9). The same kinds of gravestones are visible in the different

cemeteries at Ghanem al-Ali village. The difference in gravestones does not reflect a difference in human groups, but reflects the generation, economic position, preference, or opportunity to buy gravestones.

Though the location of graves and cemeteries reflect the relationships of human groups well, grave and gravestone typology do not reflect these differences. Various types of grave and gravestones are used by the same *aila* in the same cemetery. The typological differences among them tend to reflect the generational, economic and social disparities rather than the human groups themselves.

Cemetery formation process

We can point out one more aspect of modern cemeteries at Ghanem al-Ali. We can observe the regular formation process of each cemetery. The first graves were constructed at the center (Cemetery 1, 3, 4) or at the one end (Cemetery 2 and 5) of each cemetery. Then, the cemetery expanded to the periphery or the other end (Fig. 17, See also the number in each grave oval in Figs 8, 11, 14, 16. It indicates the passing year.). The former pattern tends to be observed at the cemeteries constructed on the hill, and the latter pattern tends to be those on the slope.

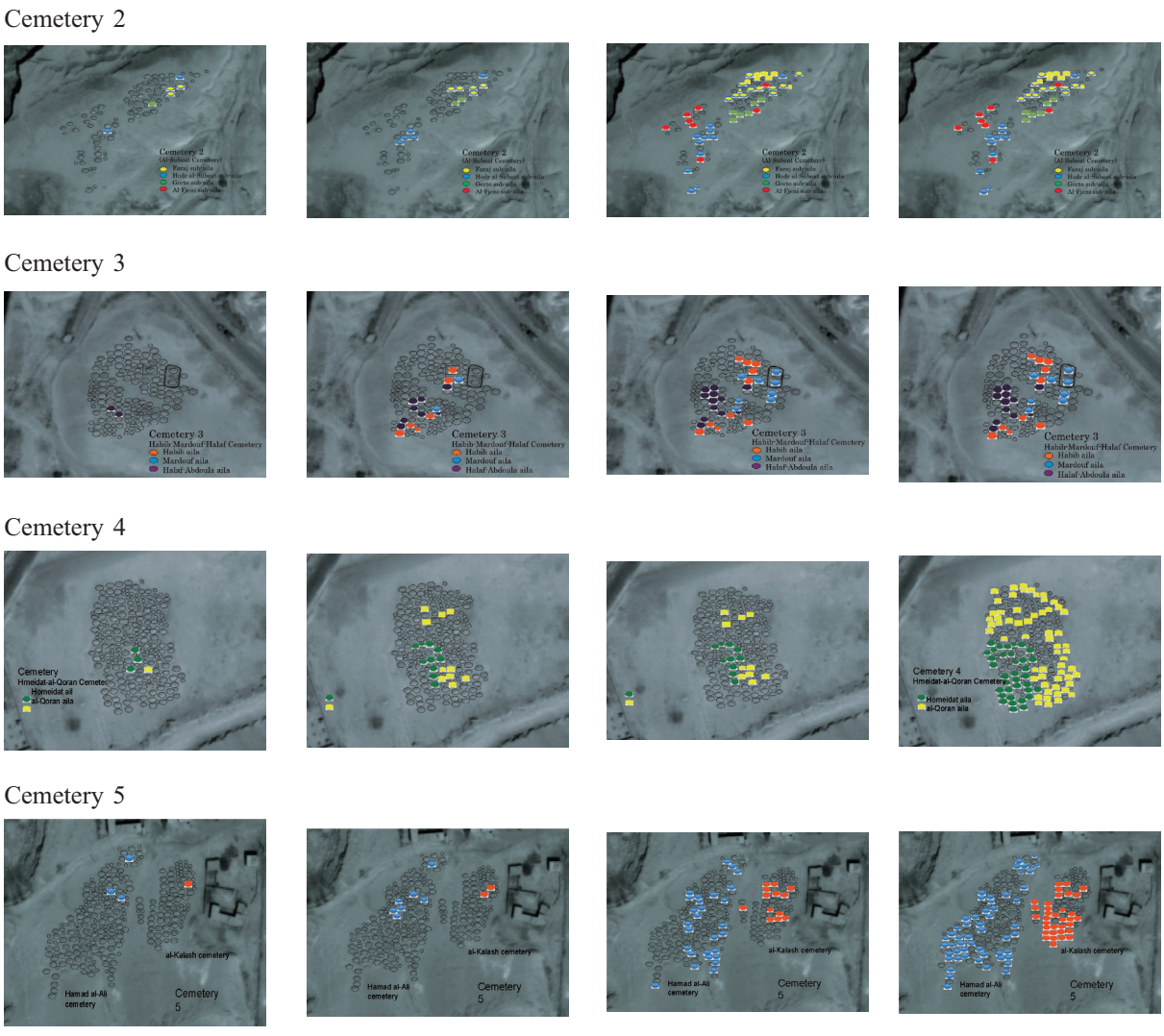

Fig. 17 Formation Process of each cemetery at Ghanem al-Ali village.

The state of each cemetery reflects various human relations. If we study archaeological remains carefully based on these viewpoints, we may have an opportunity to get some clues about ancient human relationships.

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PRELIMINARY ANTHROPOLOGICAL SURVEY OF THE VILLAGES IN WĀDĪ RAḤŪM AND AROUND TALL GHĀNIM AL-'ALĪ

Masayuki AKAHORI*

Introduction

This paper is primarily based on the anthropological survey attempted in March 2009 as part of the 8th working season of the project. Although the research period was short, a general idea of the present-day interrelationship between the nomads and sedentaries in the area between the Jabal Bishrī and the Euphrates was sought in order to contribute and complement the archaeological research that was underway there. Particular attention was paid to the areas around the archaeological sites in Wādī Raḥūm and around Tall Ghānim al-Alī.

My team consisted of historians and anthropologists. However, an analysis of the collection of historical documents has not yet met the desired level for this paper. Hence, I will limit the scope of this paper to the data collected from the anthropological interviews.

The Case of Arab Tribes and Nomads

Before I present the information we gathered on the field, I will introduce two theoretical points about the Arab tribes and nomads, which are popular among the anthropologists working in the Middle East.

One point to note is about the use of the term "Arab tribes." During the 1940s and '50s, anthropologists widely used the term "tribe," and it was used so diversely that it often brought about confusion during academic conferences and discussions between experts of different regions. For example, Africanists used the term to describe a language group whose members sometimes exceeded ten million, as in the case of the Yoruba.[1] However, if we apply the same definition to the Arabs, we would have to consider all the Arabs as belonging to a single tribe.

In recent years, the term "tribe" has become nearly obsolete in anthropology, but some unique exceptions can be found in the studies of the nomadic people in the old continent, including Arab, Turkish, and Mongolian nomads. It is not because the level of these studies is outdated in comparison to others. Usually, anthropologists conducting research among the Arabs use the term "tribe" as an equivalent to native terms, such as "*qabīla*" or "*ashīra*." It is significant to note that the term "tribes" here is relevant to the researched people as well as the researchers. Moreover, we should bear in mind the fact that the tribes of the Arab nomads or the Bedouins can be defined clearly and narrowly as a particular social organization. The tribe of the Arab nomads follows a system that applies the principle of patrilineal descent to their ancestry, co-tribesmen, and their land so that all three are classified, referred to, and utilized by a single framework. In other words, it harmoniously combines the patrilineal descent, segmentary constitution of the members of the society, and segmentary territoriality for grazing lands and water sources into their pastoral lives herding camel, sheep, and goats.[2] This kind of system, which anthropologists usually call the "segmentary patrilineal lineage

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1 M. H. Fried, "On the Concept of 'Tribe' and 'Tribal Society,'" *Transactions of the New York Academy of Sciences*, vol. 29 no. 4 (1966) pp. 527–544.

2 cf. Akahori, M., "Partly Saints and Partly Bedouins: The Murābiṭīn People among the Bedouins of the Western Desert of Egypt," *Journal of Sophia Asian Studies*, vol. 22 (2004) pp. 75–86.

system," is generally found among the Arab nomads but seldom among the sedentary Arabs; it is also rarely found among the nomads of other regions.[3] Most of the residents interviewed were originally nomads, and determining how these people have maintained or changed their tribal system is one of the crucial points of this paper.

The other notable point is with regard to nomadization and sedentarization. Pastoral nomadism is often misunderstood to be an ancient source of livelihood that existed even before the agricultural revolution. However, many anthropologists deny this assumption and suggest that pastoral nomadism was a newly invented form of livelihood after the agricultural revolution. If we consider the agricultural revolution to have occurred at the same time as the Pastoral Revolution—where ex-hunter-gatherers started domesticating animals and cultivating crops—it is little wonder that nomadism, a livelihood specialized in pastoralism, could not have existed before such domestication.[4] Therefore, we should consider that in the early history of nomadism, we see the development of a process of nomadization wherein sedentary people left arable lands and became obliged to settle down in the desert in tents, surrounded by animals. On the other hand, once nomadism spread widely in the arid zones, where only a limited population could survive, nomadization reduced and the process of sedentarization began.[5] Anthropologists state that, for nomads who rely on sedentary people for much of their food, clothing, and utensils, contact with peasant societies is apparent and indispensable.[6] Moreover, we would like to state that the process of sedentarization also involves the renewal of relations between nomads and peasants.

In view of the above two points, I would now like to elaborate on the data collected on the field in Bilād al-Shām, the land of roses.

Bi'r Raḥūm

Bi'r Raḥūm is a small village. If you turn off the main road between Aleppo and Raqqa at a small town called Manṣūrīya, a narrow street stretching to the south will lead to the village at the very end. The village faces the vast Syrian Desert and is embraced within a large *wādī* descending from the Jabal Bishrī. Its estimated population is about 300 and almost all of them trace their lineage to al-Tushūsh, a branch of the Faḍ'ān tribe of the 'Anaza. Typically, the Faḍ'ān is considered to be a tribe or a "*qabīla*," and the 'Anaza is considered to be an aggregate of five tribes. The 'Anaza is one of the largest tribal groups found in the eastern part of the Arab world.[7]

The fourth generation of villagers are now settled in their sedentary lives in the village, even though their great grandparents were nomads. Although the people of the neighboring villages still regard these people as nomads or Bedouins, they themselves do not accept this idea. It is a fact that most of them rear sheep and goats and pitch tents for daily use, but only a small part of the villagers pitch tents in other areas, such as Tadmor, and periodically move between the villages and camps. This transhumant way of herding is still existent in the area.

The village name "Bi'r Raḥūm" is a combination of two words—"bi'r" and "Raḥūm." The former indicates a "water well," and it is derived from the fact that the village has many wells. Currently,

3 M. D. Sahlins, "The Segmentary Lineage: An Organization of Predatory Expansion," *American Anthropologist* vol. 63 (1961) pp. 322–343.

4 cf. A. Sherratt, "Plough and Pastoralism: Aspects of the Secondary Products Revolution," I. Hodder et al. (eds.) *Pattern of the Past: Studies in Honour of David Clarke*, Cambridge: Cambridge University Press, 1981.

5 P. C. Salzman (ed.), *When Nomads Settle: Processes of Sedentarization as Adaptation and Response*, New York: Praeger, 1980. See also N. N. Lewis, *Nomads and Settlers in Syria and Jordan, 1800–1980*, Cambridge: Cambridge University Press, 1987.

6 A. M. Khazanov, *Nomads and the Outside World*, J. Crookenden tr., Cambridge: Cambridge University Press, 1984.

7 E. Gräf, "'Anaza," *EI*^{2}, p. 482; T. Ashkenazi, "The 'Anazah Tribes," *Southwestern Journal of Anthropology*, vol. 4, no. 2 (1948), pp. 222–239. See also A. Zakariyā, '*Ashā'ir al-Shām*, Dimashq: Dār al-Fikr, 1945. It contains much useful information on the nomads around Jabal Bishrī, though it was not fully exploited in this paper.

they have 15 wells that are for daily use along with a middle-sized open-air basin for gathering rainwater. Some of the wells were dug after the people settled in the village, but many of them have been there prior to the foundation of the village. They had been used by the nomads. The latter term “Raḥūm” is the name of a legendary nomad who became the owner of this area and is sometimes said to be the first person who dug the wells of this village. He is said to have acquired this area during the Ottoman era with the permission of the greater Bedouin *shaykh* who dominated the area near Aleppo.

More than 10 extended families can be found in the village, each of which, roughly saying, form their own compound that is composed of two to five houses. Each well belongs to one of these compounds, but generally, the other families are not disallowed from using the wells.

The villagers have regular contacts with the nomads during the summer. They say that in most cases, the visiting nomadic people belong to the ‘Anaza group who come from the Gulf area, but recently, nomads belonging to other groups, such as the Shammar,[8] have been known to arrive to feed their livestock. Visiting nomads are free to use the village wells, but in some cases they may be charged a fee.

No other people in the neighboring villages between Bi’r Raḥūm and Manṣūrīya belong to the ‘Anaza group. Almost all of them identify themselves as Bū Khamīs, a branch of the Idlīm, who are a tribal aggregate primarily found in southeast Syria and southern Iraq. Both the ‘Anaza and Idlīm trace their bloodline to Zubayda,[9] who moved from Yemen to Nejd in the historical past, but their ancestry is clearly distinguished among themselves. Nowadays, in the villages of the people belonging to the Bū Khamīs, contacts with nomads are said to be very rare.

In this regard, Bi’r Raḥūm is an exceptional example in this area owing to its ancestry and relatively intimate contact with nomads. It is more than likely that the people of Bi’r Raḥūm were sedentarized later than those of the villages of Bū Khamīs. In addition, the relatively longer distance between Bi’r Raḥūm and the neighboring Bi’r Zamla, in comparison to the distance between the villages of Bū Khamīs and those around it, seems to support this idea. On the other hand, the people of Bū Khamīs still maintain better knowledge about the segmentary classification of their co-tribesmen, and the distribution of villages reflects this classification to some extent. In addition, they have their own *shaykh* or village representative living in one of the villages. Compared with them, we must say that Bi’r Raḥūm is an isolated community that lacks the main characteristics of a tribal system.

Roughly speaking, Bi’r Raḥūm is a bordering village where nomads and sedentary people meet each other and exchange goods and information. Its dwellers are relatively newly settled members, and therefore, the village is socially marginal for both the nomads and sedentary people. They do not have their co-tribesmen in the neighborhood and have no strong ties with the people of the neighboring villages as the peasants do. However, we can also assume that such a situation makes it possible for the people of the village of Bi’r Raḥūm to share a smooth relationship between the two types of people whose livelihoods are based on different conditions.

Ghānim al-‘Alī

The village of Ghānim al-‘Alī is at the basin of the Euphrates, and its size is much larger than Bi’r Raḥūm and the villages of Bū Khamīs. The number of residents is estimated to be a couple of

8 Shammar is also one of the largest tribal groups in Arabian Peninsula. J. S. Jabbur, *The Bedouins and the Desert: Aspects of Nomadic Life in the Arab East*, L. I. Conrad (tr.), New York: State University of New York Press, 1995, pp. 282–283; J. S. Jabbūr, *al-Badw wal-Bādiya: Ṣuwar min Ḥayā al-Badw fī-Bādiya al-Shām*, Bayrūt: Dār al-‘Ilm lil-Malāyīn, 1988, p. 226. See also C. R. Raswan, “Tribal Areas and Migration Lines of the North Arabian Bedouins,” *Geographical Review*, vol. 20, no. 3 (1930), pp. 494–502.

9 Zubayda appears as Banū Zubayd in some hadīths. A. Hafner, “‘A-mr b. Ma‘dīkarīv,” *EI*[1], P.226.

thousands. Most of the residents of the village are descendants of a person named Ghānim al-ʻAlī, from whom the village name originated. The name Ghānim al-ʻAlī is the name of their ancestor, village, and lineage; however, the formal name of the village has recently been changed to Gharnāṭa.

This large village is in fact a complex of four residential areas, three of which are occupied by all the three sub-lineages of Ghānim al-ʻAlī, that is, al-Muhammad al-ʻAlī, Maradhīkh, and Ḥumaydāt; the fourth area is called Subiʻāt, where the offspring of a brother of Ghānim, Muḥammad al-ʻAlī reside. Subiʻa is the name of the grandfather of Ghānim and Muḥammad. His name has been adopted as the name of the area presumably because it can express common descent with the other villagers, while using the name Muḥammad emphasizes that they belong to a descent line that is different from others.

The lineage of Ghānim al-ʻAlī is part of the tribe Bū Shaʻbān, which also traces its ancestry to Zubayda just like ʻAnaza and Idlīm, and it occupies the area along the Euphrates between Raqqa and Deir ez-Zor. Their residential zone extends along the river but is often at a distance from it. It is partially because they were sedentarized primarily during the Ottoman era, when the areas along the banks of the Euphrates were already villages occupied by people who had been living as farmers since a long time. Close to Ghānim al-ʻAlī, we come across the descendants of his brother, Muḥammad al-ʻAlī, who form some villages; in one of these villages, Qusbī, a tomb of Muḥammad, is located. Unfortunately, nobody knows where Ghānim al-ʻAlī is buried.

The degree of sedentarization of the people in Ghānim al-ʻAlī exceeds that of Bi'r Raḥūm and even the villages of Bū Khamīs. They identify themselves as traditional farmers, Rīfī, while the latter two prefer the term "Arab." They retain the tribal classification of the people to some extent, and the territoriality of their segments, both within the villages and in the surrounding villages, can be recognized by researchers. However, they do not have a *shaykh*, at least in this area, but consider their representative to be an elected village headman. Some elders behave as if they were tribal *shaykhs*, but their influence does not seem to go beyond the range of smaller lineages or *ʻā'ilas*.

More evidence can be found in the cemetery of the village of Ghānim al-ʻAlī. The tombs of the eight saints—Muḥammad al-Shuyūkh, Aḥmad al-Shuyūkh, Jāsim al-Shuyūkh, Muʻjil al-Mūsā, Muḥammad al- Mūsā, Khalaf al- Mūsā, ʻAlī al-Faraj, and Muḥammad al-Faraj—are kept here and visited by the womenfolk for intercessory invocations. The saints, *ṣawāliḥ* or *ṣāliḥ* in the singular form, are said to have been originally villagers of Ghānim al-ʻAlī when it was still small and located closer to the river. In fact, *laqab* or the title of saints, such as al-Shuyūkh and al-Mūsā, are now the names of major families in the village. I was told that the saints had been members of the Rifaʻīya, one of the most popular Sufi orders in Syria and the eastern part of the Arab world.[10] This kind of Sufism and veneration of saints is totally lacking in the cases of Bi'r Raḥūm and the villages of Bū Khamīs. Although Sufism is, generally speaking, rarely found among the Bedouins, the fact that even veneration of saints, which is usually popular among the nomads, is totally absent may require additional interpretation. Currently, it is not clear, but it may be assumed that the period of sedentarization of the people of Bi'r Raḥūm and the villages of Bū Khamīs was not long enough for them to have developed their own traditions of saint veneration on their lands.[11]

In addition, we should pay attention to the existence of an exceptional village that is similar to Bi'r Raḥūm in this area. It is the village of Zūr Shammar, located to the east of Ghānim ʻAlī. People of the surrounding villages consider Zūr Shammar[12] to be a village of Bedouins. Of course

10 C. E. Bosworth, "Rifā'iyya," *EI*^{2}, p. 525.

11 cf. Akahori, M., "Narrating Tales of Saints is Making Saints: Three Different Hagiographic Traditions of a Muslim Saint in the Egyptian Desert," *Orient* (2007) vol. 42 pp. 27–39.

12 See n. 8. It seems the same group but has not yet been confirmed. Burckhardt says zor (=zūr) means the right bank of the Euphrates. J. L. Burckhardt, *Travels in Syria and the Holy Land*, 1st pub. in 1822, Whitefish, MT: Kessinger, 2004, p. 622.

the people of this village no longer migrate. It is true that they were nomads in the past, but so were those in other villages. In this case, the term “Bedouins” is used to describe the people who were originally nomads themselves and to designate the people who belong to different tribal groups. In addition, we can suppose that the villagers of Zūr Shammar settled in this area later than those from Bū Sha‘bān. It is more than likely that such enclaves of ex-nomads would be widely found in the agricultural areas that are spread along the Euphrates.

The area around the Ghānim al-‘Alī barely has any direct contact with nomads today. Instead of wells, the villages have plenty of water from the Euphrates and can provide the nomads with rich grasslands after cultivation, but the nomads today do not seem to come to this area. The villagers have contact with co-tribesmen in Syria, Iraq, and sometimes in the Arabian Peninsula, some of whom may be nomads, but this contact cannot be considered a daily co-existential interrelationship between the nomads and sedentary people.

Overview

If we believe the villagers’ knowledge about their folk history, the people living around the two archaeological sites of Tall Ghānim al-‘Alī and Tall Wādī Raḥūm were originally nomads, who were sedentarized during the Ottoman period or the first half of the twentieth century. In the course of time, owing to sedentarization, they lost their identity as nomads and began to consider themselves as merely Arab or even Rīfī. In this context, the people or villages that were sedentarized later are called “Bedouins.”

Even after sedentarization, people tend to retain their patrilineal descent. If the settled population is large enough, they also maintain a segmentary classification of their co-tribesmen. This knowledge about their ancestry and segmentary tribal organization is characteristic of the original nomads and is lacking among other peasants along the Euphrates.

Today, regular contact of sedentary people with nomadic people is found only in the village of Bi’r Raḥūm during summer. This seems to indicate that such kinds of contact are mainly established along the fringes of sedentary zones as long as nomads and sedentary people live in a co-existential mode. Before and during the Ottoman era, there existed contact with the nomads in the areas that were closer to the Euphrates; however, since the sedentarization was accelerated in modern times, the contacts were established some distance from the river and now exist in Wādī Raḥūm.

If this hypothetical theory is applicable, the historical development of sedentarization can be assumed to be such that newcomers always settle in the peripheral areas of agricultural zones along the Euphrates, thus expanding the zone outwards from the river, though sometimes leaving intruded enclaves of ex-nomads, as in the case of Zūr Shammar. With regard to this survey, the people of Ghānim al-‘Alī and its neighbors, with the exception of Zūr Shammar, were the first settlers, the people of Bū Khamīs were the second, and those of Bi’r Raḥūm were the last to settle in the region. From these examples of sedentary people, we can say that sedentarization is a process that absorbs nomads and assimilates them into sedentary life. In this process, newly settled villagers who were originally nomads take on a role to mediate the interrelationship between nomads and sedentary people, which is now assumed by those of Bi’r Raḥūm. The villagers of Bū Sha‘bān, Bū Khamīs, and Faḍ‘ān were settled in this area in relatively recent times, but they must have had different experiences in different places and at different times during the modern history of the region.

An analysis of the collected historical documents is incomplete and further detailed research, which is based on interviews particularly with nomads migrating around Jabal Bishrī, would be required in the near future. However, if we presume that the basic geographical setting, environmental conditions, and forms of both, nomadism and agriculture, have not greatly changed since the earliest times, the aforementioned tentative overview of the system of contact between nomads and sedentary

people is most likely to be applied in the archaeological studies now underway in this mission.[13]

13 Some works in archaeology have already shown similar approach. eg. O. Bar-Yosef and A. Khazanov (eds.), *Pastoralism in the Levant: Archaeological Materials in Anthropological Perspectives*, Madison, WI: Prehistory Press, 1992.

ZOOARCHAEOLOGY AND ETHNOARCHAEOBOTANY AT TELL GHANEM AL-ALI

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Ken'ichi TANNO[4] amd Hiroo NASU[5]

Introduction

During our research between 2005 and 2009, we focused on the aspect of subsistence at archaeological settlements in the area that covers upper Tigris and Euphrates valley in the north to southern Jordan in the south. The chronology of these sites under investigation also varies, from Pre-pottery Neolithic to the Late Bronze Age. The aim of our research was to understand the process of initial domestication of plants and animals as well as the development of agricultural and pastoral economy in this region. Specific questions include the beginning of nomadic pastoralism and introduction of new cultivars of crops. In this paper, we focus on the subsistence at Tell Ghanem al-Ali, an Early Bronze Age site in the Jabel Bishri. Ethnoarchaeobotanical investigation as well as the study of modern vegetation was carried out by C. Akashi and K. Tannno, and the zooarchaeological study was carried out by L. Omar. Tell Ghanem al-Ali is located on the southern bank of the Euphrates River. Currently this region receives less than 250 millimeter annual rainfall. Rain-fed agriculture is not possible under this climatic condition and the area depends on irrigation to support farming.

Samples for analyses

Material for both ethnoarchaeobotanical and zooarchaeological analyses were collected from the sondage (Square 1) on the eastern slope of the tell and the step trench (Square 2) on the northern slope. For ethnoarchaeobotanical analysis, charred seeds and wood were collected by floatation method. For zooarcheological analysis, animal bone remains were hand-picked during the excavation. All materials for analysis belong to the latter half of the Early Bronze Age. Small amount of soil was sieved to test whether bones of fish and small mammals exist, but few bones of small fish and mammals were found. Therefore, we concluded that the bias from hand-picking collection method was insignificant.

Result of ethnoarchaeobotanical investigation

Today, no original vegetation is left around the present village of Ghanem al-Ali. Agriculture in the field around the village is sustained by large-scale irrigation, where wheats, barley, corn, and cotton are grown. The hills along the river are covered with typical steppe-desert vegetation, with plants belonging to Chenopodiaceae, Leguminosae, and Compositae families being abundant. Other than these major families, the present vegetation includes quite a diverse plant species.

During the excavation, a total of 260 liters of soil samples were collected, and close to 600

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Table 1. Samples taken for water floatation and recovered seeds at Tell Ghanem al-Ali

	Square 1 (Grid 10 × 10 m)	Square 2 (Step Trench)
Sample soil (L)	50	210
No. of sample	5	24
Charred remains	250 ml	330 ml
Identified seeds	8,430	13,140

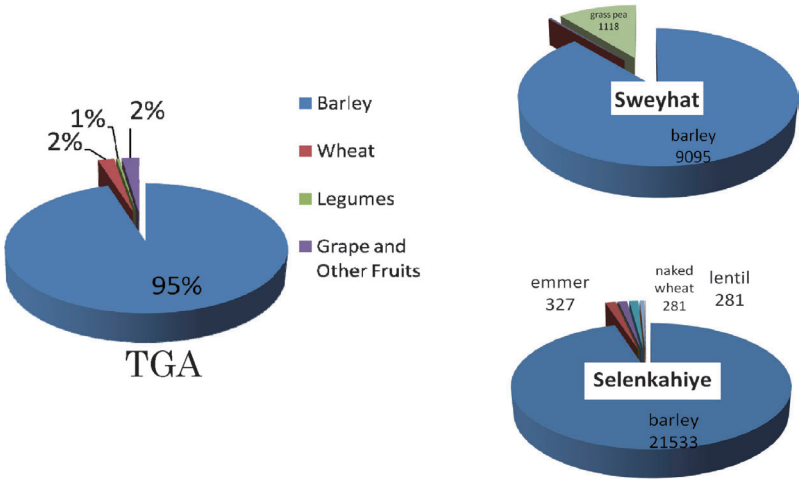

Fig. 1. Proportion of identified seed at Tell Ghanem al-Ali and contemporary sites.

milliliters of charred remains were recovered by floatation using 0.5 millimeter mesh (Table 1). About 8500 pieces of seeds were recovered from Square 1, and more than 13000 pieces from Square 2.

Among the food plants, hulled barley is dominant from the very beginning of the occupation of Tell Ghanem al-Ali. A small amount of wheat (amounting to 1% of the volume of barley) has been found, which is only 1% of the barley. The predominance of barley is also the case at other EBA sites in the region, such as Sweyhat (Zettler 1997) and Selenkahiye (Fig. 1).

When the upper and lower levels at Tell Ghanem al-Ali are compared, there was not much difference through time in the use of food plants, both in the range and proportion. Besides barley and wheat, lentil (*Lens*), grass pea (*Lathyrus*), *Vicia sp*., and grape pips (*Vitis*) were recovered. It looks like the grape pips increases in the upper level, but the number might not be so different between the lower and upper levels, because the count shown in Table 2 includes fragmental remains.

As for the wild taxa, at least 49 genera of 23 families were identified. Chenopodiaceae is the most abundant family at this site, and in total more than 5500 seeds were recovered (Table 2). The frequency of this family is extremely high in the lower level, but this is mainly a contribution of just one sample containing more than 2000 Chenopodiaceae seeds. Among this group, *Suaeda* was the most abundant species, which could be one of the weeds in the barley field. As *Suaeda* is a salt resistant plant and can also grow on alkaline soil, the abundance of this plant might indicate salinization around the field, possibly as a consequence of irrigation. However, *Suaeda* could also have been mixed in the dung fuel, originating in the fodder for domestic animals. We can infer that dung fuel was commonly used at Tell Ghanem al-Ali, because wood charcoals were rather scarce at the site. Analysis of one of the samples taken from the upper level of Square 1 also supports this latter interpretation. Barley and other food plants were not particularly abundant in this sample. More than 80% of the identified seeds belong to wild taxa, especially *Prosopis*, *Trigonell*, and *Aizoon*. These are possibly derived from dung fuel. Especially, *Prosopis* is a common weed in agricultural

field in Syria and domestic animals eat leaves of this plant. More than 100 seeds of this species were found in this sample. Since it is unlikely that *Prosopis* seeds were brought into the site with the harvested crops, we presume that these seeds came from animal dung used for fuel. The *Aizoon* and *Astragalus* found together with *Prosopis* were also probably mixed in animal dung. Thus, by identifying what varieties of plant seeds were mixed in the dung fuel, we might be able to postulate where domestic animals were pastured.

Gramineae weeds are also commonly found. Typical weeds like *Bromus* sp. and *Lolium* sp. are constantly found from many samples. Figure 2 shows some of the typical charred seeds of this group found at the site. They were probably brought into the site with harvested crops, as these grass weeds are commonly found in barley field even today. Among Leguminosae, seeds of a kind of clover (Trifoliae) and bush appear as frequently found species.

Polygonaceae seeds are ten fold more abundant in the Upper Level comparing to the Lower Level

Table 2. Food plants recovered at Tell Ghanem al-Ali

	Season Phase No. of sample Square	2007 Upper Level 7 Sq. 1 and 2	2008–2009 Lower Level 22 Sq. 2
barley		5266	3327
wheat		44	131
barley/ wheat		< 700	< 700
fruit	*Vitis, Ficus*	122	10
legume	*Lens, Lathyrus, Vicia etc.*	32	81
Chenopodiaceae	*Atriplex sp.* *Suaeda sp. etc.*	381	5289
Gramineae	*Aegilops sp.* *Lolium sp.* *Bromus sp. etc.*	1003	1252
Leguminosae	*Astragalus sp.* *Trigonella sp.* *Prosopis sp. etc.*	628	688
Aizoaceae	*Aizoon sp.*	257	307
Boraginaceae	*Heliutropium sp.* *Lithospermum sp.*	200	352
Polygonaceae	*cf. Rumex sp.*	452	46

Lolium sp. *Bromus* sp. *Aegilops* sp.

Fig. 2. Weed seeds found from Tell Ghanem al-Ali.

(Table 2). We are currently examining whether this difference comes either from actual change in the abundance of Polygonaceae plants through time, or due to spatial difference in vegetation within the site where the samples were collected. Other miscellaneous taxa include Rubiaceae, Malvaceae, Caryophyllaceae, and Labiatae.

Result of zooarchaeological analyses

Study of animal bone remains from Tell Ghanem al-Ali suggests that domestic species dominate the faunal assemblage (Fig. 3). Among them, domestic sheep and goats were the most abundant species at this site. Bones of these two animal taxa together comprise 71% of the total number of identified specimens. Sheep to goat ratio is 3.6 to 1, suggesting sheep were much more important than goats. Wild taxa are only about 20% of the identified specimens and include Asiatic wild ass (*Equus hemionus*), gazelle (*Gazella subguttrosa*), fallow deer (*Dama mesopotamica*), and hare (*Lepus capensis*) (Fig. 4).

The range of animal taxa and their relative proportion at Tell Ghanem al-Ali are similar to those at other Bronze Age sites in northern Syria. All contemporary sites in the region heavily depended on domestic ungulates, especially sheep and goats. The proportion of pigs is, however, relatively high at sites located to the north of Khabur River, such as Tell Mozan (Doll in press). Tell Brak (Embeling *et al*. 1999; Weber 2001), Tepe al Atigeh, and Tell Leilan (Fig. 5. Zeder 1994;

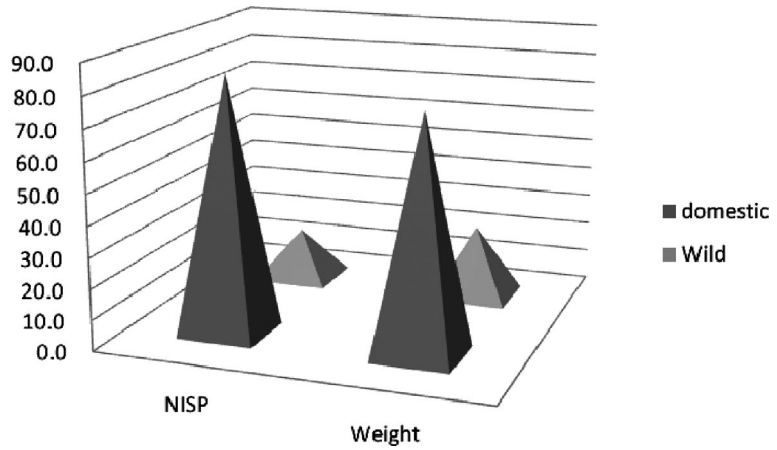

Fig 3. Proportion of domestic and wild taxa based on fragment count and bone weight.

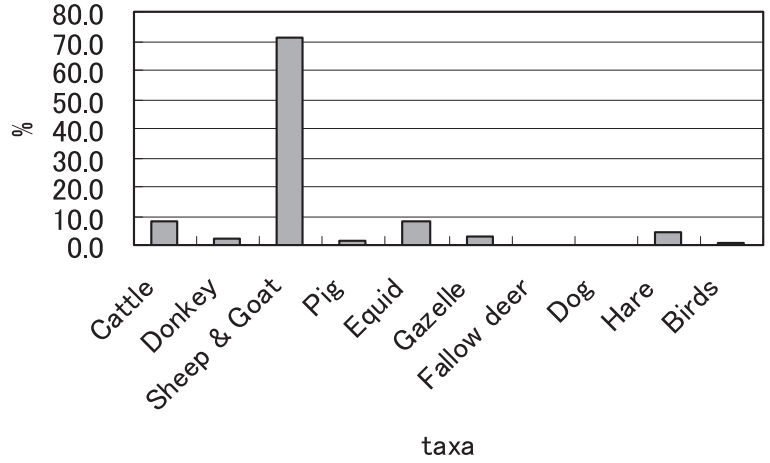

Fig 4. Relative abundance of identified taxa at Tell Ghanem al-Ali based on the number of identified specimens (NISP).

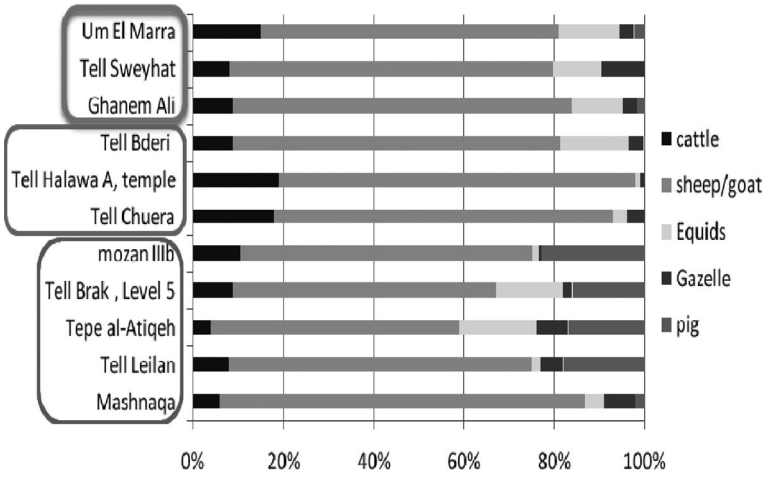

Fig 5. Relative proportion of major animal taxa at Bronze Age sites in northern Syria (based on NISP).

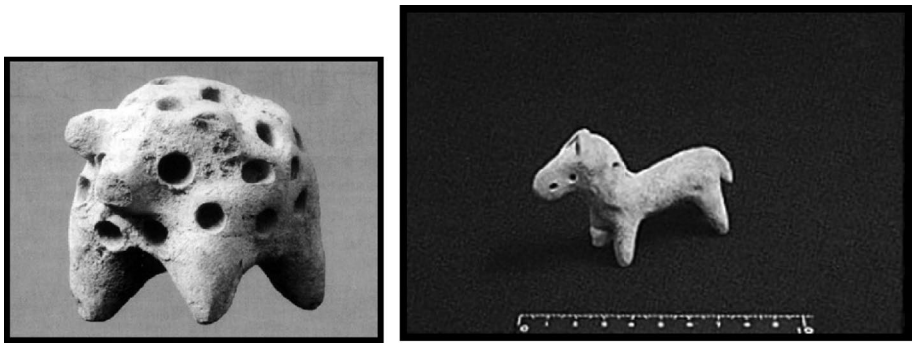

Fig 6. Pig (left) and equid (right) figurines found at Tell Ghanem al-Ali.

Zeder 1998). Pigs are rare at Tell Ghanem al-Ali, but a pig was depicted in one of the figurines found at the site, suggesting the importance of this animal in spite of the small number of pig remains found at the site (Fig. 6, left).

Relatively high ratio of wild animals was observed at Tell Bderi, Umm el-Marra, and Tell es-Sweyhat. One of the major wild games at these sites was Asiatic wild ass (onager), but the importance of onager hunting is difficult to assess, due to identification problem. Domestic ass were also kept at the site, and many of the equid remains could not be identified to the species level.

Among the equid remains found at Tell Ghanem al-Ali, based on the measurements only the presence of domestic donkey was confirmed, although onager was also likely to be present at the site. An equid figurine was also found at the site (Fig. 6, right)

Size of sheep

As examined above, sheep was the most important animal at this site. The size of sheep remains were compared using Log Size Index method (Fig.7) (Meadow 1981, 1983, 1999; Uerpmann 1979; Uerpmann, & Uerpmann, 1994). The Log Size Index distribution of 96 sheep measurements also confirms the presence of both sexes. The shape of histogram suggests that there were probably slightly more females in the assemblage. The comparison of distal humerus measurements of sheep also suggests the presence of both males and females at the site (Fig.8). The sheep at Tell Ghanem al-Ali seem to be larger than those found at other contemporary sites in northern Syria. The sheep from Tell Bderi, located in the arid southern Khabur Valley were much smaller.

Since the faunal assemblage available from Tell Ghanem al-Ali so far all belong to the latter

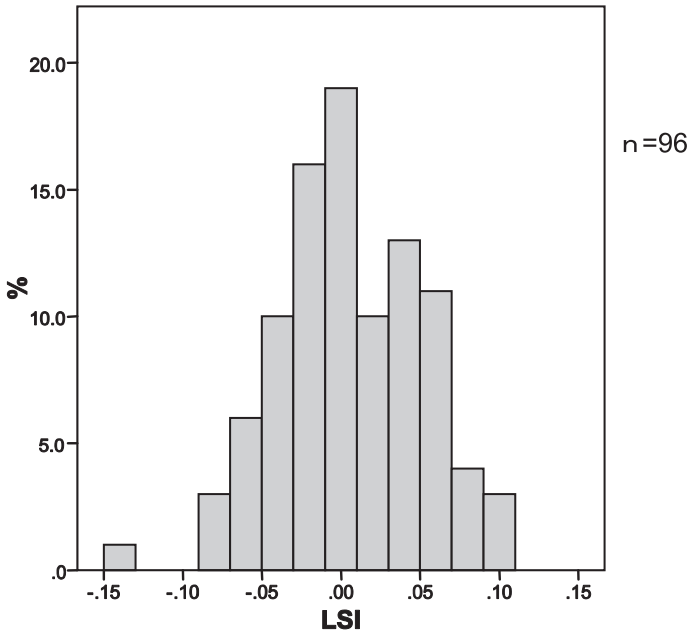

Fig 7. Log Size Index of sheep at Tell Ghanem al-Ali.

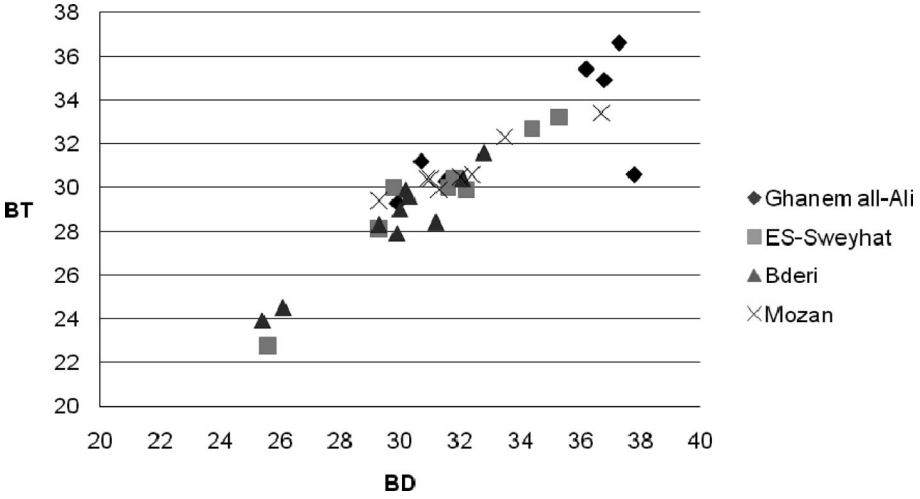

Fig 8. Measurements of distal humerus of sheep at Tell Ghanem al-Ali.

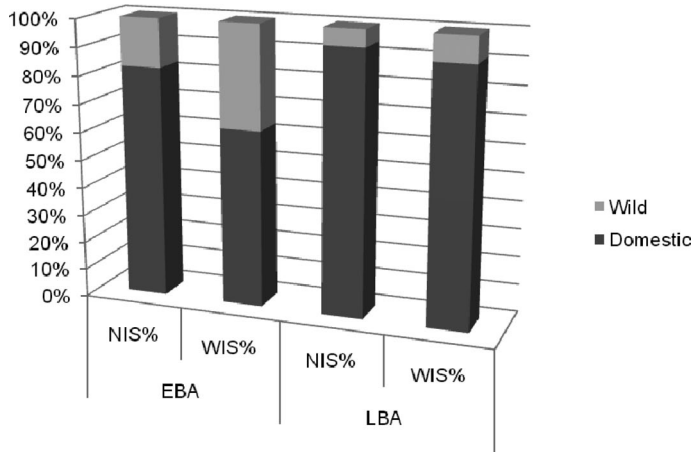

Fig 9. Proportion of wild and domestic taxa at Tell Bderi.

half of Early Bronze Age, it is not possible to see diachronic changes in animal exploitation patterns. The result of zooarchaeological analysis at Tell Bderi, where Early Bronze Age as well as Late Bronze Age assemblages are available, suggests that importance of domestic animals, especially of sheep and goats may have increased through time (Fig. 9) (Becker 1988).

Conclusion

The results of zooarchaeological and ethnoarchaeobotanical analyses suggest that Tell Ghanem al-Ali was a village or could be a small post in a strategic location on the Middle Euphrates, with its economy mainly based on local production and consumption of food. Domestic animals, especially sheep and goats were predominant, but wild taxa supplemented the meat supply. The age profile of sheep and goats indicate that domestic animals were bred and slaughtered within the site, as animals of all age class including juveniles and old animals are present in the assemblage. The agriculture depended on the cultivation mainly of hulled barley. The predominance of barley as well as the abundance of Chenopods, especially *Suaeda* sp., indicate the salinization of the soil due to irrigation.

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HUMAN REMAINS FROM THE BRONZE AGE SITES IN BISHRI REGION, THE MIDDLE EUPHRATES SYRIA

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1. Introduction

Human remains from the Bishri area were excavated in the 2008 and 2009 field seasons (Fujii et al., 2009a: Fujii et al., 2009b). They were collected from burial cairns. Most of the specimens were fragments and there were no complete skeletons. The condition of skeletal remains depends mainly on the passage of time and the type of soil and the character of the burial cairns might have been the cause of the poor condition of the specimens. The burial cairns were secondary tombs for the people in this area in general; it is possible that some of the skeletons in them were reburials.

The remains from 2008 were scarce, with only few useful specimens and so the preliminary study of the specimens showed only the possibility of remarkable development of the muscles in lower limbs (Nakano, 2009).

In 2009, many human remains were found in the Bishri area. These specimens were unearthed from the sites of Tor Rahum 1 (TRH-1), while the specimens found in 2008 were from the sites of Rujum Hedaja 1 (RHD-1) (Fujii & Adachi, 2009). Other human remains were excavated from the site of Wadi Shabbout (WS) and Tell Ghanem al-Ali (TGA) by Ohnuma and his colleagues.

Some specimens were sent to Japan for age determination with the carbon 14 dating method under the permission of the Directorate General of Antiquities and Museums and Raqqa Museum. The analyses are still in process. Next the specimens should be used for molecular analyses of mitochondrial DNA.

2. Descriptions

Tor Rahum 1 (TRH-1)

Here, we described the morphological traits of the specimens found in 2009. Some burial cairns of TRH-1 contained many specimens. It was suggested that the burial cairns were constructed in Bronze Age, a time when nomadic groups were based in the area (Fujii & Adachi, 2009).

The burial cairns that contained human remains in TRH-1 include BC-117, BC-118, BC-123, BC-127, BC-130, BC131 and BC-133. The total number of human remains was more than 500 pieces. However, almost all of the specimens were fragments and were difficult to use for precise analytic studies. Some small bones such as finger bones, carpal and tarsal bones were present in complete form. And many fragments of limb bones carried traces of physical traits. These limited specimens were useful for limited morphological studies. The cairns also included some human skulls, but they were not complete and did not reveal sufficient information for analysis.

1. Burial Cairn No. 117 (TRH-1/BC-117)

More than 50 specimens were excavated from BC-117. They consisted of at least 3 individuals because three bones of the same part (distal end of right femur) were found among the specimens. One

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of the femurs had the features of a young individual such as a separated epiphysis, while other bones showed the features of adults, such as the development of tuberosity at the origin of the muscle. The specimens also included a small right lower jaw with a first molar that was very worn (Fig. 1), suggesting that one individual was elderly. There was one almost complete sacrum in which the caudal part was more curved than a normal one (Fig. 2). It would have been influenced by the strong connection of the Sacrospinous ligament. Such a deformation could occur with aging, but its functional meaning was not sure. It was very difficult to decide the sex. The size factor might be the most useful standard for the sex determination, but it is not certain except for extra large-

Fig. 1 Right lower jaw from TRH-1/BC-117.

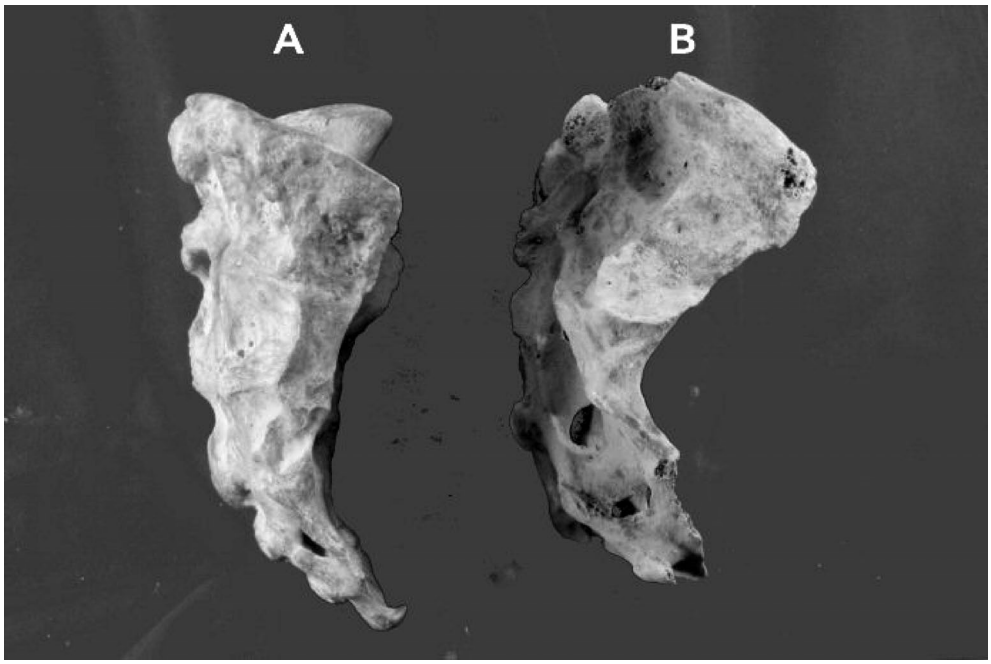

Fig. 2 Comparison of the lateral views of the sacrum. A: normal modern human. B: the specimen from TRH-1/BC-117.

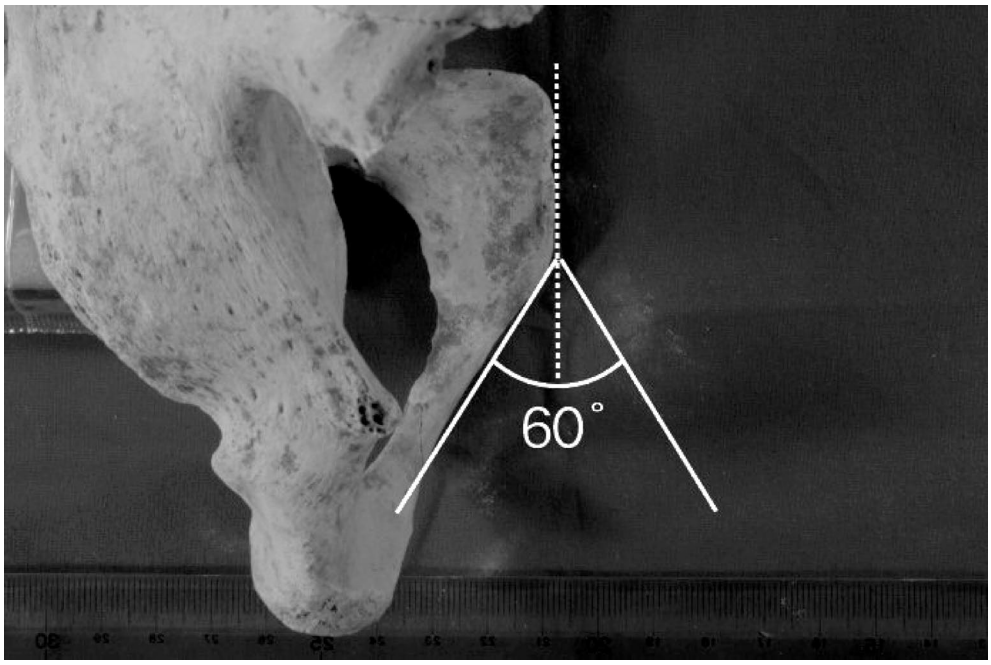

Fig. 3 Left pelvis bone from TRH-1/BC-117.

size remains. One specimen gave certain information for sex determination; a left pelvis bone that included the complete pubis (Fig. 3). The angle of pubic arch is an obvious index for the sex determination, in this case a 60-degree angle indicative of a male.

2. Burial Cairn No. 118 (TRH-1/BC-118)

About 50 specimens composed of some skull fragments and many postcranial bones were excavated from BC-118. The skull fragments had less information. Postcranial bones included limb bones, vertebrates, and hip bones. There were two left proximal femurs. One appeared to be from a young individual and another from an older one. Almost all of the other bones were also present in two types, young and old. However, it is possible that the bones were from more than two individuals.

3. Burial Cairn No. 123 (TRH-1/BC-123)

The skeletal specimens from BC-123 were rather scarce. However, they included the bones from three or more individuals as there were three right patellae among the specimens, one slightly smaller than other two. There were two lower jaws (Fig. 4, 5). One had two teeth. The wear of the enamel showed the individual was a young adult. Another jaw had no teeth, so that it was quite difficult to infer the age.

4. Burial Cairn No. 127 (TRH-1/BC-127)

Many postcranial bones were found in BC-127. Some of the limb bones did not have an epiphysis. The specimens could have included one or more teenagers.

There were two tibiae, left and right (Fig. 6, 7). These bones showed an outstanding morphological feature; namely, a flatness of the tibial shaft. The standard for the flatness is the cnemic index (transverse diameter / anteroposterior diameter at nutrient foramen). In the result of the measurement, the index of the right tibia was 65.47 and the left one was 61.39. By anthropological standards, if the index is less than 63.0, the tibia is platycnemic; between 63.0 and 69.9, mesocnemic; and greater than 70.0, eurycnemic.

Platycnemic tibias are not common in modern people; they are a feature of the Jomon and old

Fig. 4 Lower jaw from TRH-1/BC-123.

Fig. 5 Lower jaw from TRH-1/BC-123.

Ainu peoples in Japan (Morse, 1879; Koganei, 1893), as well as Cro-Magnon and other prehistoric peoples. The cause of the platycnemic tibias is controversial; for example, there are the theories about muscular development, shortage of nutrition, the common ancestral morphology of human and so forth (Morimoto, 1981). Matsumura et al. (1983) performed experiments with rats for postnatal formation of the platycnemic tibia through the overuse of hindlimbs. The study showed that there was a relationship between platycnemic tibias and the use of the muscle in the hindlimbs. For prehistoric peoples including Jomon and Ainu, walking and running were routine in all aspects of their life.

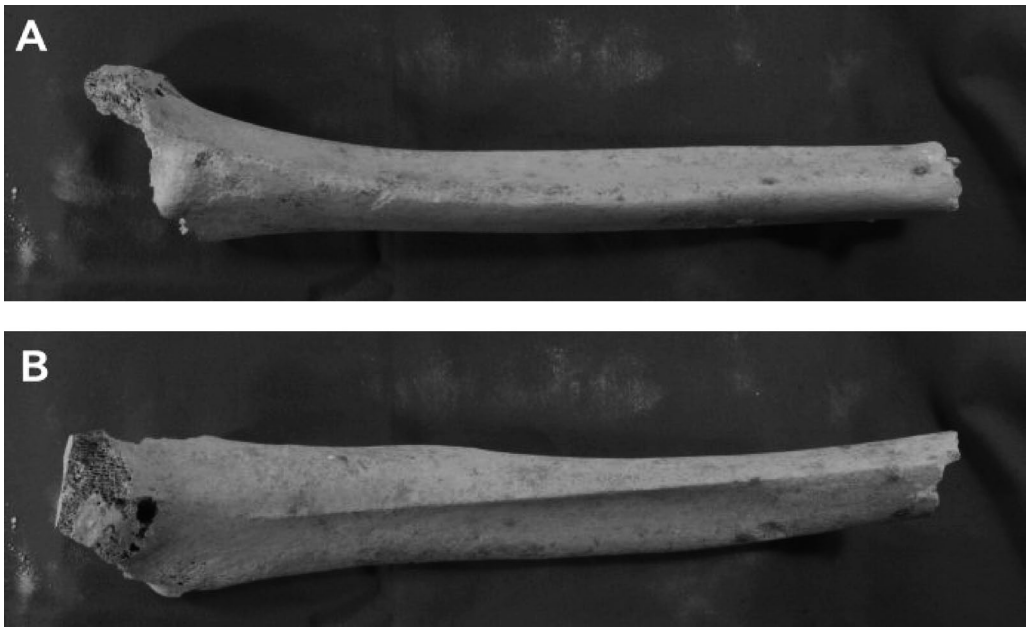

Fig. 6 Shaft of left tibia from TRH-1/BC-127. A: frontal view. B: lateral view.

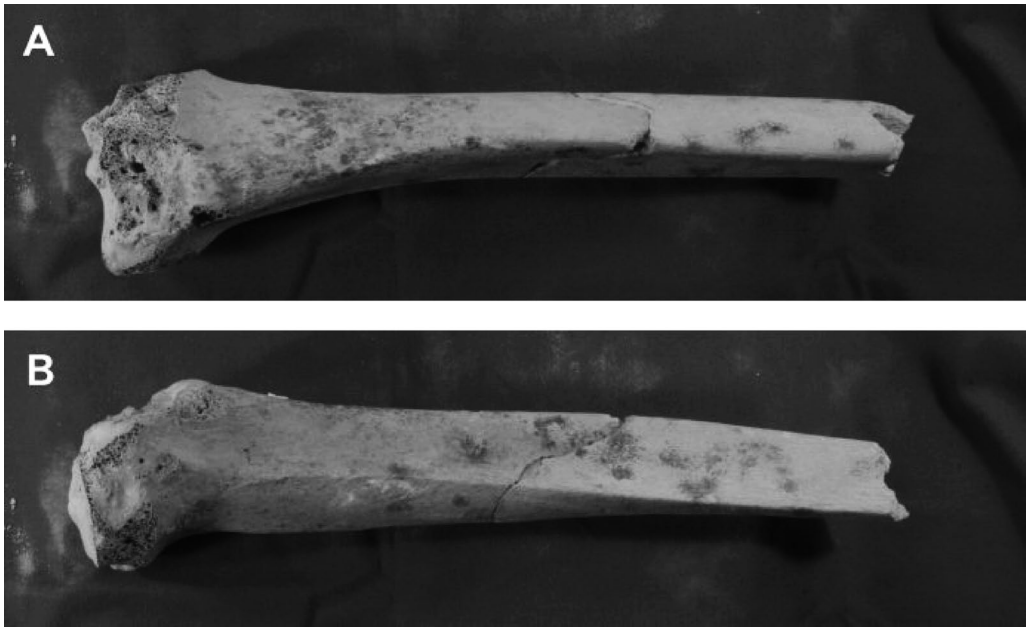

Fig. 7 Shaft of right tibia from TRH-1/BC-127. A: frontal view. B: lateral view.

Of course, it is difficult to explain the tendency of the population from a few specimens; however, the flatness of the tibiae might suggest the lifestyle of the Bronze Age people in this area.

One skull without a face was excavated from this site. The specimen was collected with matrix and was very fragile. Therefore, it was too difficult to observe for its details. It was certain, however, that the suture line was not fused. Therefore, the individual might have been a teenager.

5. Burial Cairn No. 130 (TRH-1/BC-130)

The most abundant supply of human remains was brought from BC-130. There were many postcranial bones and 2 incomplete skulls. One skull had a braincase without the facial part (Fig. 8). The inside of the braincase was filled with matrix. The frontal and parietal bones remained. The lower

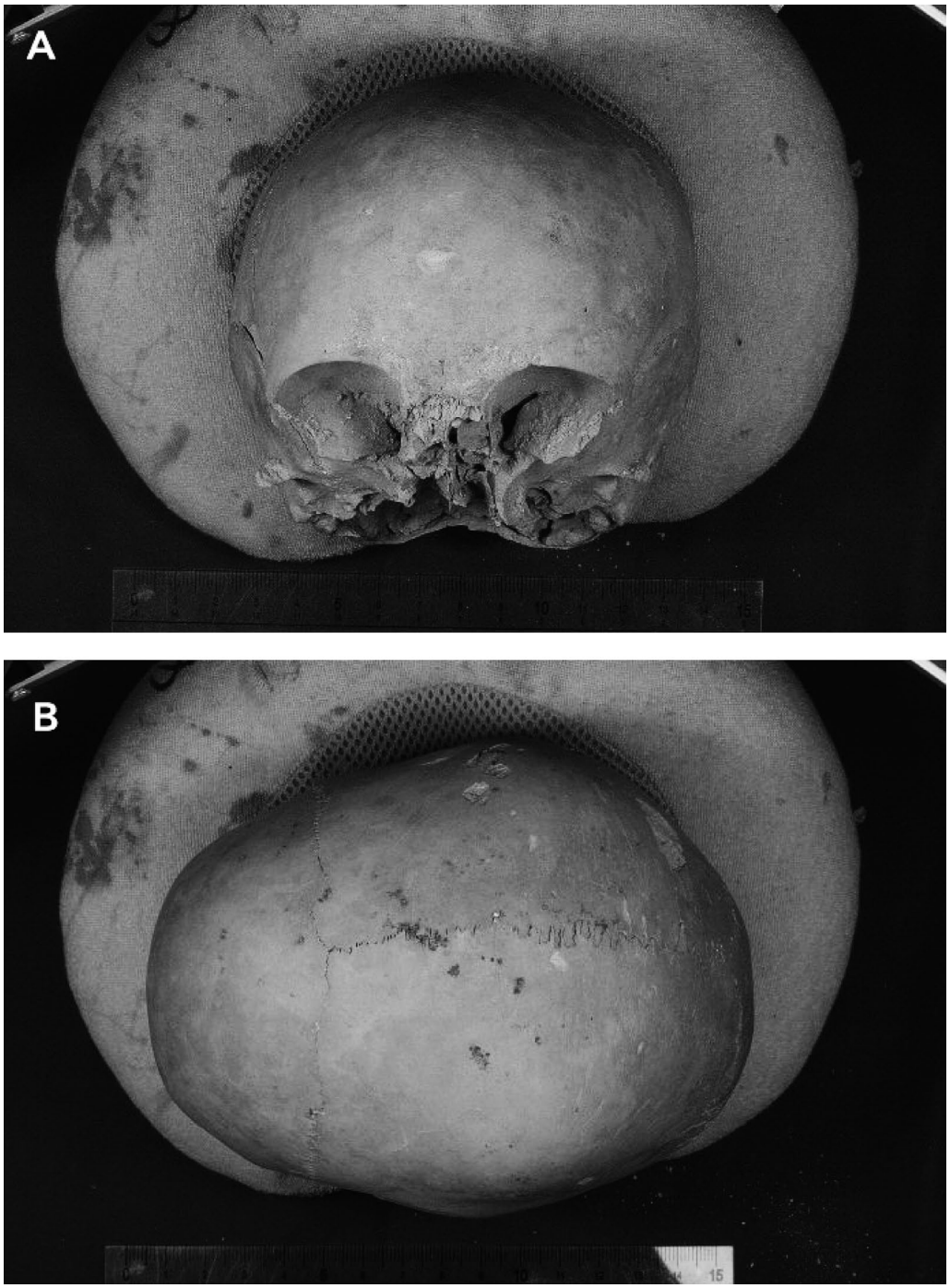

Fig. 8 Skull from TRH-1/BC-130. A: frontal view. B: upper view.

parts of the temporal and occipital bones were lacking and the foramen magnum was missing. The suture line was clear but the closure was not strong, and the bulge of the frontal bone was not very great. These features might show that it was the remains of a young female. The skull was very fragile; therefore, we needed to take great care in handling it for further studies. Though the metrical study was restricted because of the lack of the lower part, the maximum cranial length (GOL) and the maximum cranial breadth (XCB) were measured, and the values were 165.74 and 126.62. The cranial index found from these values was 76.39. This was plotted in the range of mesocranic type. Needless to say, this result did not represent the tendency of the population.

Another had only a skull cap without temporal bones and the lower part of occipital bone.

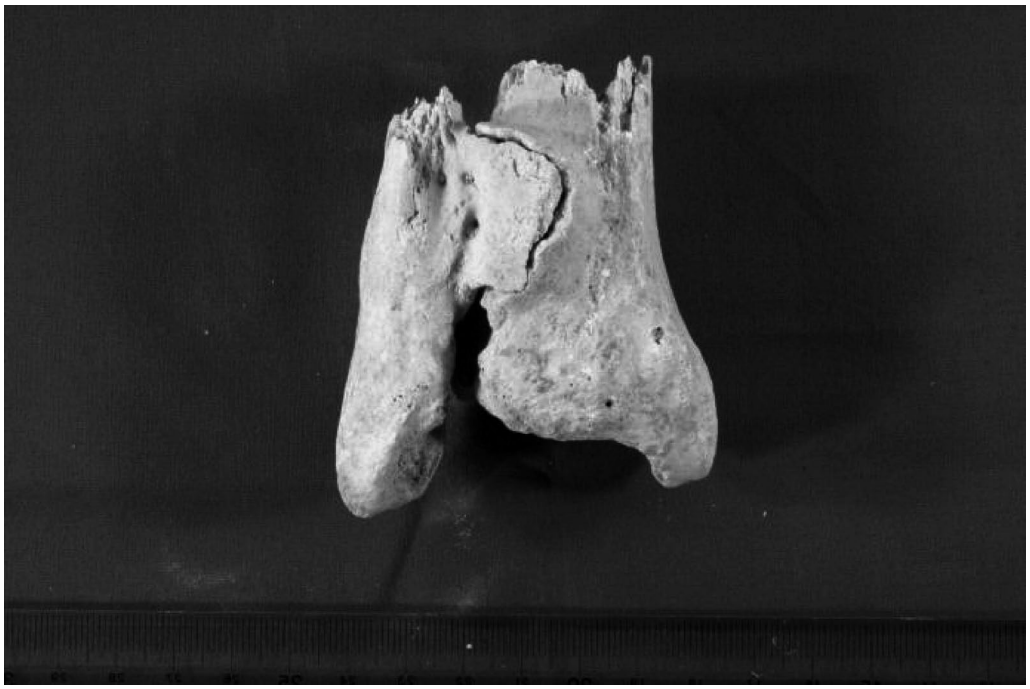

Fig. 9 Distal ends of tibia and fibula from TRH-1/BC-130.

The sagittal suture had disappeared in the dorsal area, showing that the individual was not young. No useful measurements were possible.

Many postcranial bones were also excavated. The total number of specimens, including undetermined fragments, was more than one hundred and they included plural bones of the same skeletal part, such as femurs and scapulas. Especially, there were many tarsal bones including 2 left tali, 6 right tali, 5 left calcanei and 8 right calcanei. The epiphyses of some limb bones were not fused with the shafts, and some bones had clear epiphysial lines. These traits showed that the bones belonged to young individuals. There were few bones with outstanding deformation of the bones, a trait of aged individuals. Therefore, the specimens included bones from various-aged humans, and it was difficult to know the exact number of individuals.

There were specimens that had a particular strange deformation. They were distal ends of the tibia and fibula with pathological change (Fig. 9); namely, they were combined together by the development of bony tissues. This pathological change often occurs with a fracture; however, in these bones, there was no trace of fracture. These two bones were separated as usual. The tibiofibular ligaments had made the connection between the distal ends of these bones. A strong connection would be important for stability in walking or running, but it would not be suitable for the adduction or abduction of tarsal joints. Indeed, the function of the adduction and abduction were not so evident in the tarsal joints, yet they would be needed to climb a slope or walk on uneven ground. If they were living only on flat ground, such as the desert, they would not need the tarsal joint function, except for movement in a plantar-dorsal direction. Thus, the combination of the bones might indicate a life style adapted to a particular environment. The tarsal joints must bear the weight in the walking and running, so the amount of the load might also be related to this change.

6. Burial Cairn No. 131 (TRH-1/BC-131)

Almost all of the remains were animal bones. They were only two human bones, a left metatarsal (II) and a right metacarpal. There were no outstanding features in these bones.

7. Burial Cairn No. 133 (TRH-1/BC-133)
Many human bones were excavated from BC-133 though most of them were undetermined fragments. A left upper jaw without teeth was included in the set of specimens. Some vertebrae including the axis were also found in the set. Most of the specimens lacked the vertebral arch. The epiphysial line remained on the cranial and caudal ends of one thoracic vertebra while other vertebrae showed obvious epiphysiodesis. There were two isolate teeth (upper C and Upper I2), but it was difficult to know the details because of the lack of the enamel. The development of tuberosity in limb bones was not remarkable. The specimens included at least two individuals.

Wadi Shabbout (WS) and Tell Ghanem al-Ali (TGA)
The archeological survey of the site in Wadi Shabbout and Tell Ghanem al-Ali was performed by Prof. Ohnuma and his colleagues (Ohnuma and Sultan, 2009; Numoto and Kume, 2009). The sites were about 50 km north of Jabal Bishri and near Euphrates. There were few human remains compared to archeological remains.

1. Wadi Shabbout 1 (WS-1)
In 2009, a lower jaw, vertebrae, a hipbone, tarsal bones and large-size limb bones were excavated from WS-1. All of the bones appeared to be from one individual. They might have originated from the Roman Era in the view of Prof. Ohnuma. It is a pity that many of the bones were fragile because the condition of the soil was not suitable for the preservation. Therefore, we need to handle them carefully and there was not sufficient time for precise observation. The size of the tibia and fibula showed that the individual was quite tall and robust. The articular surfaces of the talus and calcaneus were very worn. These details suggested that the individual was an old man.

2. Tell Ghanem al-Ali (TGA)
There were two sets of specimens from the TGA site. One group was the bones of a baby or a newborn. All of the specimens were fragments. It was difficult to gain more information. Another set was found from sq.6, including fragments of limb bones. Some of the bones had no epiphysis, or there was a clear epiphysial line if they had the epiphysis. Therefore, the specimens might be from a teenager. The sex and other information could be expected in further studies.

3. Discussion and conclusion

In the results of observations of morphological features, there were few intact specimens from aged people. The bones of aged people are easily broken, but the reason for this tendency might be found in other factors, such as the lifespan in that age or cultural bias.

The development of muscles was traced on the surface of the bones that each muscle was attached to. The enlargement or deformation of the attached area indicates the degree of development of the muscles. The trend were quite different between the upper limbs and lower limbs showing a tendency for the muscles in the lower limbs to be well-developed while those in the upper limbs were not as developed. These features might be related to the humans' lifestyle. Moving on foot might have occupied a high percentage of life in those days. The deformation to the tibia (i.e. the flatness) and the pathological change in the distal end of tibia and fibula might both be the result of such a lifestyle. This tendency was related to the development of the muscle in the lower limbs and the tight structure of the ankle joints.

For further insight into their lifestyle, the morphological pattern in the talar joint facet of the calcaneus was focused on. It has been shown that the morphological variation in the talar joint facet of the calcaneus differs among the human populations (Tanaka et al., 2004a, 2004b). Kudaka

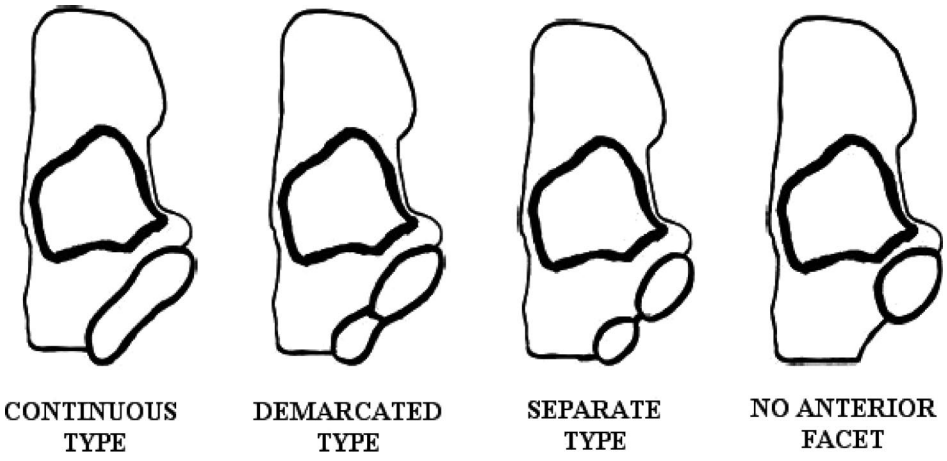

Fig. 10 Types of talar joint facets of the calcaneus. (Kudaka, et al., 2008)

et al. (2008) studied the shape of the talar joint facet of the calcaneus and talus of the early-modern human remains from Kumejima, an island in Okinawa prefecture, Japan. They classified the specimens into 4 types of articular facet (Continuous Type/Demarcated Type/Separate Type/No Anterior facet Type) (Fig. 10). And they compared the results regarding the frequency of the separate type of joint facet to those in other studies in Japan (Tanaka et al., 2004a, 2004b; Sunada, 1932; Murata and Sakai, 1994; Nakashima and Hojo, 1986) and overseas (Drayer-Verhagen, 1993; Gupta et al., 1977; El-Eishi, 1974; Bunning, 1964; Bunning and Barnett, 1965; Padmanabhan, 1986; Yamaguchi, 1981). As a result of the comparison, the English and Egyptians had high frequencies of the separate-type joint facet of the calcaneus (67.0 and 51.0) and two populations of Indians (34.9 and 31.2) and Native Americans (30.5) had the lower frequencies. The Kumejima Island (47.2) and central Kyushu groups (49.0) of the modern period showed a high frequency of the separate-facet type among Japanese Islanders, while prehistoric and historic East Japanese showed rather lower frequencies (Kudaka et al., 2008). Kudaka et al. (2008) concluded that the continuous and demarcated type of the joint facet, compared to the separate type, was suited for a lifestyle that needed complicated movements of the foot, such as one involving cultivation.

In the specimens from TRH-1, there were ten calcanei for the observation of the talar joint facet. The result was as follows; 1 continuous type, 3 demarcated type, 6 separate type and 0 no-anterior-facet type. The frequency of the separate type was 60%, possibly and suggesting that the population of the TRH-1 did not have complicated movements of the foot, for example, standing firmly while using cultivating tools, and so forth. Meanwhile both of the calcanei from WS-1 were classified into the continuous type. The individual from WS-1 might have had a different lifestyle.

The discussion of the morphological features and the deductive reconstruction of the lifestyle in the present study are tentative because of the paucity of information from the specimens. However, further precise studies including age determination with the carbon 14 dating method and analyses with mitochondria DNA shall extract fruitful results.

Acknowledgements

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PART II

BRONZE AGE SITES OF SYRIA

THE EARLY BRONZE AGE CHRONOLOGY BASED ON ^{14}C AGES OF CHARCOAL REMAINS FROM TELL GHANEM AL-ALI

Toshio NAKAMURA*

1. Introduction

The Early Bronze Age chronology in Syria has been studied in relation with those of the Near and Middle East countries, by means of historical events recorded in written documentations as well as the relative-age estimation based on typological analysis of relics, such as pottery fragments, stone tools, bronze artifacts, terracotta, etc. As one of the leading indicators, Anastasio et al. (2004) have summarized the Early Bronze Age chronology in the Near and Middle East according to the ages estimated by relative-dating techniques. On the other hand, direct age measurements based on scientific methods, such as radiocarbon (^{14}C), thermo luminescence (TL), optically stimulated luminescence (OSL) dating techniques, etc., were scarcely applied for the samples excavated so far from the archeological sites, in particular, in Syria.

Recently, we had a chance to conduct a field survey on archeological sites along the middle Euphrates River, as well as geographical and geological environment in the Bishri region, southeast of Raqqa, Syria, in the Near and Middle East (Hoshino et al. 2009; Nakamura et al. 2009). The aim of this study is to conduct a chronological analysis of the archeological sites, in particular, to establish an absolute chronology of the Tell Ghanem al-Ali site, by ^{14}C dating on carbonaceous remains at the site with an accelerator mass spectrometry (AMS) facility of Nagoya University in Japan. We report here the results of ^{14}C dating on 26 charcoal samples collected from the archeological site located at lowland of the Middle Euphrates (the Tell Ghanem al-Ali site), and 7 samples from the cairn tombs at the Tor Rahum Cairn Field-1 site in the Bishri Mountains.

2. Sample collection at Tell Ghanem al-Ali and at Tor Rahum Cairn Field-1 sites

^{14}C dating study was conducted for charcoal samples collected from two areas: (1) the Tell Ghanem al-Ali archeological site located on the lowest terrace formed at the middle course area of Euphrates River; (2) the cairn monuments produced as graveyards at the Tor Rahum Cairns Field-1 site in the desert region of the Bishri Mountains.

2.1 Samples from Tell Ghanem al-Ali

The Tell Ghanem al-Ali site is located at a right-sided plain of the Middle Euphrates, ca. 40 km southeast of Raqqa (Fig. 1), one of historical cities in the Republic of Syria. This site consists of a small mound, covering the area of ca. 400m in east-west, ca. 300m in north-south widths, and the height of ca. 10 m from its ground level (ca. 227 m a.s.l), as shown in Fig. 2. Two trenches were set on the northeastern slope of the Tell (Ohnuma and Al-Khabour 2008b). A trench named Square-1, 10 m in east-west and 10m in north-south directions, was set on the east slope of the Tell where some structures, such as lines of white mud or stones and several remains in squared shape were observed on the surface (Hasegawa 2008). The other trench, named Square-2, was set on the northern slope of the Tell (Kiuchi 2008). The Square-2 trench covers 4 m in east- west, and

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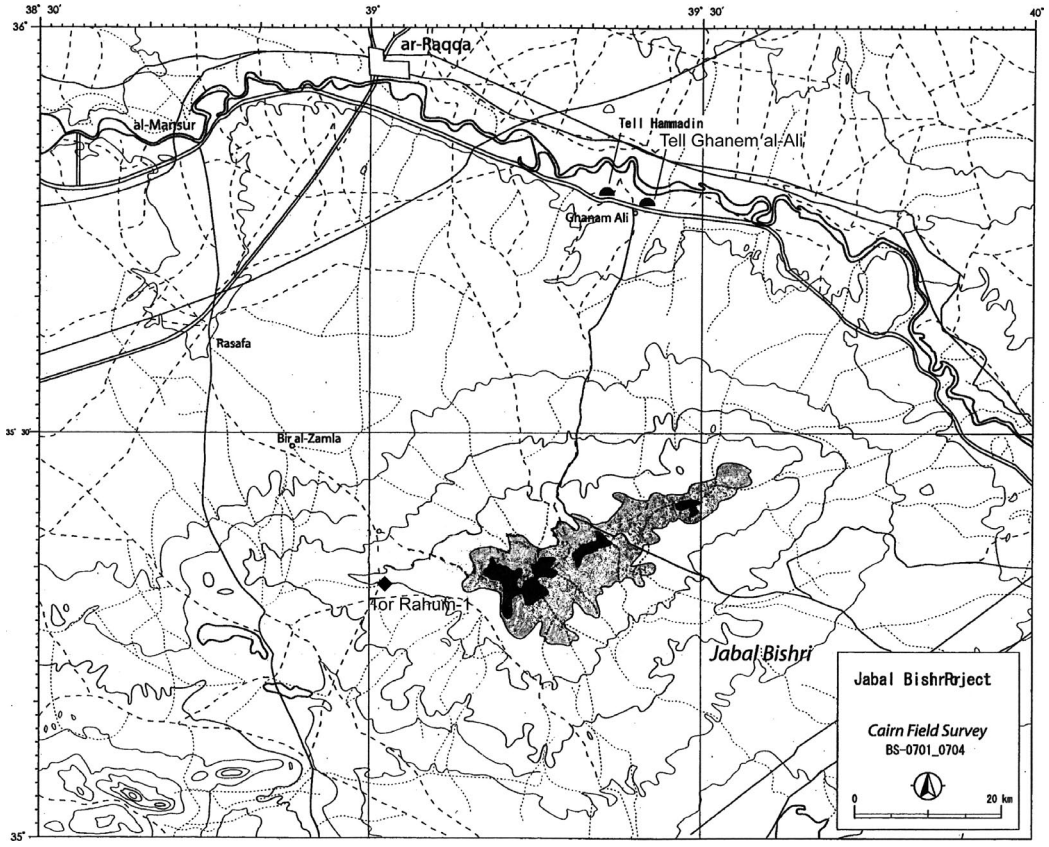

Fig. 1 Locations of the archeological sites investigated and Raqqa city, the Republic of Syria (cited and modified from Fujii and Adachi (2009b)). Solid half circle: Tell Ghanem al-Ali site; solid diamond: Tor Rahum Cairn Field-1.

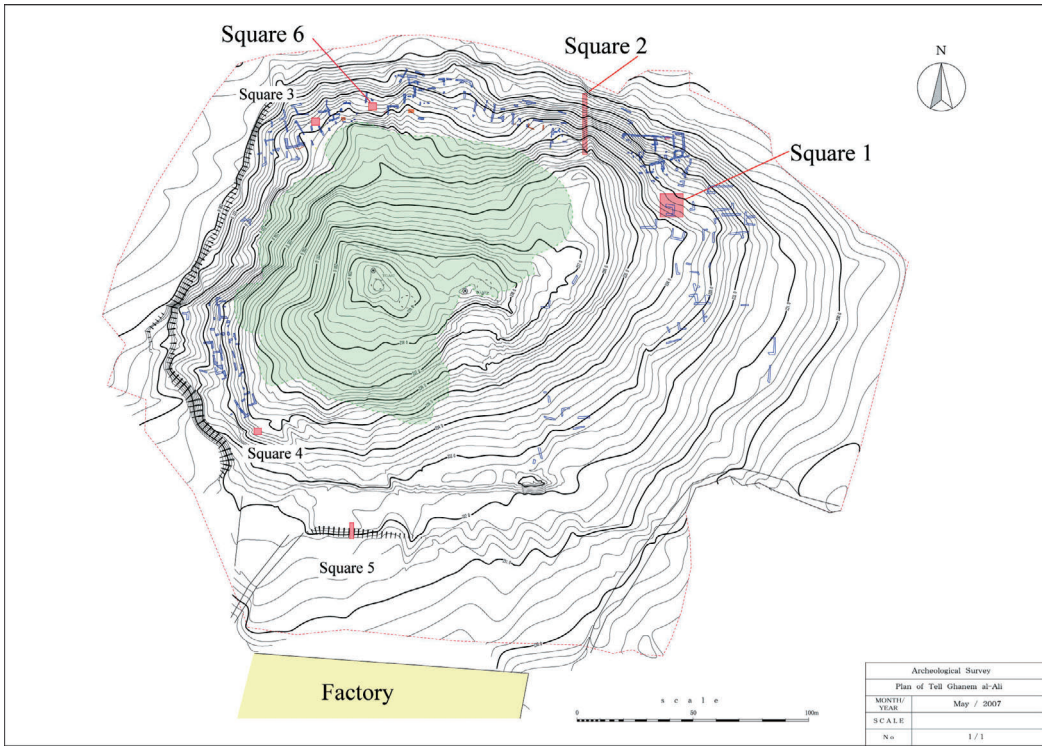

Fig. 2 Locations of Square-1 and Square-2 trenches at Tell Ghanem al-Ali site.

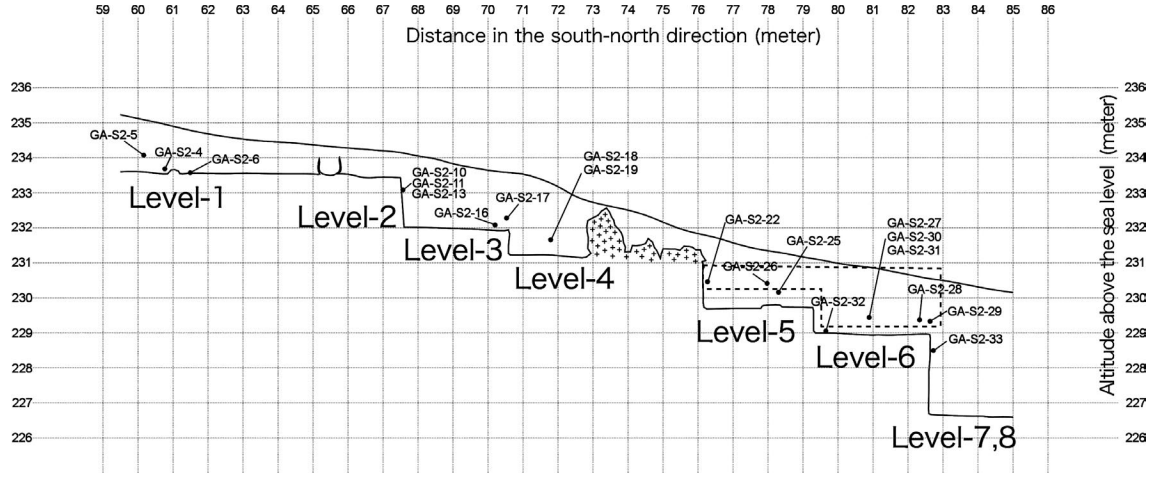

Fig. 3 Simplified cross-sectional view of the west wall of Square-2 trench. Locations of sampling charcoal fragments are shown with their labels. The samples enclosed by dashed lines are classified as the samples "uppermost layer" in Table 1, because their ^{14}C ages were obtained to be far younger than those from the deeper horizons at Level-5 and Level-6, as described in the text.

27 m in south-north direction (Figs. 2 and 3). At the Square-2 trench, Kiuchi (2008) and Hasegawa (2009) recognized several traces of human residence, i.e., structural remnants and archeological remains, such as, stone walls, stone foundations of three adjoining rooms, well-preserved mud-brick walls, traces of a door socket and a tannur, pottery fragments, several cooking-pot wares that are partly almost complete in shape, a hearth, etc. They identified at least 8 construction levels from Level-1 the highest to Level-8 the lowest, in descending order. The elevation changes from the floor of Level-1 of 234.5 m to that of Level-8 of 227.6 m above sea level. The top horizon of the base sediment under the earliest artificial layer (Level-8) at the northern end of the Tell is recognized to be 226.9 m above sea level (Fig. 3). The excavated area of the Square-2 almost reached finally the northern rim of the Tell Ghanem al-Ali site, where a road that is used presently by nearby villagers exists. Additional four trenches, named Square-3, -4, -5, and -6, were excavated successively. The results of the later excavations, however, will be discussed elsewhere.

We have collected 26 charcoal samples for ^{14}C dating with AMS, from all 8 levels as summarized in Table 1, and illustrated the sampling horizons in Fig. 3. It should be remarked that the samples enclosed by dashed lines in Fig. 3 are finally classified as the samples from the "uppermost layer" in Table 1, because their ^{14}C ages were obtained to be far younger than those from the deeper horizons at Level-5 and Level-6, as described later.

2.2 Samples from Tor Rahum Cairn Field-1

A numerous number of graves in the form of a cairn, exiting in the desert region of the Bishri Mountains, located in the south of the Middle Euphrates, have been surveyed by the members of this scientific research program, "Integrated Research in the Bishri Mountains on the Middle Euphrates" (Fujii 2008; Fujii and Adachi 2008; Fujii et al. 2009; Fujii and Adachi 2009a). During the survey of the cairns at Tor Rahum-1 from May 10th to June 2nd, 2009, Fujii and Adachi (2009b) have collected several charcoal samples for ^{14}C dating from the cairn tombs Nos. 117, 130 and 131. The charcoal samples were sent to Nagoya University for ^{14}C dating with AMS.

3. Experimental Procedure

Removal of carbonaceous contaminants by acid-alkali-acid treatments and CO_2 extraction from charred remains, production of graphite from the CO_2, and AMS ^{14}C measurements on the graphite

Table 1 δ^{13}C value, ^{14}C age and calibrated dates for charcoal samples collected from the Square-2 trench sediments, at the Tell Ghanem al-Ali site, Raqqa, Syria

No.	Sample No.	Sediment layer/ Construction level #	Altitude of sampling point (m)	$\delta^{13}C_{PDB}$* (‰, $\pm1\sigma$)	^{14}C age (BP, $\pm1\sigma$)	Calibrated age (calibrated with IntCal04, 2σ range with probability in %)	Lab # (NUTA2-)
1	GA-S2-22	Uppermost layer	230.46	–24.1	3808±31	2398–2384 cal BC (1.3%) 2346–2140 cal BC (94.1%)	14174
2	GA-S2-26	Uppermost layer	230.41	–24.4	3838±31	2459–2417 cal BC (8.7%) 2410–2201 cal BC (86.7%)	14176
3	GA-S2-27	Uppermost layer	229.44	–25.4	3703±27	2198–2167 cal BC (8.8%) 2150–2023 cal BC (85.8%) 1991–1985 cal BC (0.8%)	14088
4	GA-S2-28	Uppermost layer	229.37	–27.3	3695±28	2196–2170 cal BC (5.6%) 2146–2016 cal BC (86.7%) 1996–1980 cal BC (3.0%)	14089
5	GA-S2-29	Uppermost layer	229.32	–26.5	3760±27	2286–2247 cal BC (12.7%) 2235–2127 cal BC (71.8%) 2090–2045 cal BC (10.9%)	14092
6	GA-S2-30	Uppermost layer	229.44	–26.1	3753±28	2281–2249 cal BC (8.8%) 2231–2120 cal BC (69.4%) 2095–2041 cal BC (17.3%)	14093
7	GA-S2-31	Uppermost layer	229.44	–25.9	3744±27	2276–2254 cal BC (4.1%) 2228–2224 cal BC (0.5%) 2210–2114 cal BC (65.2%) 2101–2037 cal BC (25.6%)	14094
8	GA-S2-1	Construction level-1	233.96	–26.1	3970±28	2574–2454 cal BC (91.5%) 2419–2407 cal BC (1.5%) 2376–2351 cal BC (2.4%)	14132
9	GA-S2-2	Construction level-1	234.08	–25.1	3914±30	2475–2298 cal BC (95.4%)	14133
10	GA-S2-4	Construction level-1	233.70	–27.0	4007±29	2579–2469 cal BC (95.4%)	14134
11	GA-S2-5	Construction level-1	234.08	–12.3	4053±29	2836–2816 cal BC (5.5%) 2667–2479 cal BC (89.9%)	14135
12	GA-S2-6	Construction level-1	233.55	–17.4	4031±30	2827–2825 cal BC (0.4%) 2625–2473 cal BC (95.0%)	14136
13	GA-S2-10	Construction level-2	233.20	–26.7	3963±32	2573–2511 cal BC (37.4%) 2506–2400 cal BC (50.6%) 2382–2347 cal BC (7.3%)	14139
14	GA-S2-11	Construction level-2	233.10	–28.0	4007±35	2620–2466 cal BC (95.4%)	14140
15	GA-S2-13	Construction level-2	233.15	–24.3	3946±28	2566–2524 cal BC (15.0%) 2497–2344 cal BC (80.4%)	14086
16	GA-S2-16	Construction level-3	232.08	–26.5	4058±27	2836–2815 cal BC (6.6%) 2671–2487 cal BC (88.8%)	14087
17	GA-S2-17	Construction level-3	232.28	–26.8	4076±31	2858–2811 cal BC (14.8%) 2749–2723 cal BC (3.7%) 2700–2562 cal BC (65.7%) 2535–2492 cal BC (11.2%)	14169
18	GA-S2-18	Construction level-4	231.66	–23.7	4071±31	2854–2812 cal BC (12.9%) 2746–2726 cal BC (2.5%) 2697–2561 cal BC (65.2%) 2537–2491 cal BC (14.8%)	14171

19	GA-S2-19	Construction level-4	231.66	–25.2	4010±31	2618–2610 cal BC (1.2%) 2581–2464 cal BC (94.2%)	14172
20	GA-S2-20	Construction level-4		–25.2	4117±31	2867–2804 cal BC (24.6%) 2777–2577 cal BC (70.8%)	14173
21	GA-S2-25	Construction level-5	230.15	–26.0	4215±31	2903–2850 cal BC (36.7%) 2814–2741 cal BC (45.7%) 2729–2694 cal BC (12.2%) 2686–2680 cal BC (0.7%)	14175
22	TGA09-242	Construction level-5		–25.6	4160±33	2880–2831 cal BC (19.2%) 2821–2630 cal BC (76.2%)	14374
23	GA-S2-32	Construction level-6		–24.8	4339±28	3022–2897 cal BC (95.4%)	14095
24	GA-S2-33	Construction level-7	228.48	–26.0	4410±28	3265–3242 cal BC (3.8%) 3104–2918 cal BC (91.6%)	14096
25	GA-S2-36	Construction level-7		–25.1	4351±28	3081–3069 cal BC (2.5%) 3026–2902 cal BC (92.9%)	14097
26	TGA09-266	Construction level-8		–24.8	4316±33	3017–2888 cal BC (95.4%)	14375

*) defined as $\delta^{13}C_{PDB} = [(^{13}C/^{12}C)_{sample}/(^{13}C/^{12}C)_{PDB} - 1.0\ ] \times 1000$ (‰), where $(^{13}C/^{12}C)_{sample}$ and $(^{13}C/^{12}C)_{PDB}$ mean the carbon stable-isotope ratio for a sample and a Pee Dee Belemnite standard material, respectively. The values were measured by a Tandetron AMS system of Nagoya Univ. on graphite material synthesized from CO_2, with one-sigma uncertainty of ±1 ‰ (Nakamura et al. 2004).

materials produced, were performed at the Center for Chronological Research, Nagoya University (Nakamura et al. 2000; 2004). The procedures are described briefly in the following. The charred remains were treated with 1.2 M HCl at 80°C for 2 hrs to remove any possible contaminants by carbonate, and then the samples were treated with 1.2 M NaOH at 80°C 3 to 5 times depending on the condition of the samples. The samples were treated again with 1.2 M HCl at 80°C, and rinsed with distilled water to completely remove HCl fraction.

The charred remains were dried in an electric oven at 90°C. About 3 mg of the sample was heated to 900°C in an evacuated Vycor tube with *ca.* 500 mg of granular CuO to produce CO_2. The CO_2 produced of *ca.* 1.5 mg in carbon was purified cryogenically in a vacuum line and reduced to graphite on *ca.* 3 mg of Fe powder by hydrogen at 620°C for 6 hrs (Kitagawa et al. 1993). The graphite material prepared from carbon samples was pressed into an aluminum holder and used as a target for ^{14}C dating with a Tandetron AMS system (model 4130-AMS by HVEE, the Netherlands) at Nagoya University (Nakamura et al. 2000; 2004).

We obtained $^{14}C/^{12}C$ and $^{13}C/^{12}C$ ratios for a sample as well as for a NIST oxalic acid standard (HOxII). We then calculated R $[=(^{14}C/^{12}C)_{spl}/(^{14}C/^{12}C)_{std}]$ to represent the carbon isotope ratio for the sample $[(^{14}C/^{12}C)_{spl}]$ in the ratio to that for the NIST oxalic acid standard $[(^{14}C/^{12}C)_{std}]$, corrected for a sample ^{14}C blank caused by foreign carbon contamination in sample preparation and carbon-isotope measurements with AMS, as well as carbon isotopic fractionation, and finally multiplied a constant to normalize the R value and to define the carbon sample whose R value is unity as being produced in AD 1950 (Mook and van der Plicht 1999). For the correction of carbon isotopic fractionation, the carbon stable-isotope ratio, $\delta^{13}C$, was also measured on the graphite target with the AMS system. The $\delta^{13}C$ is defined in the following:

$$\delta^{13}C = [(^{13}C/^{12}C)_{sample}/(^{13}C/^{12}C)_{PDB} - 1.0\ ] \times 1000\ (‰),$$

where $(^{13}C/^{12}C)_{PDB}$ means the carbon stable-isotope ratio for a Pee Dee Belemnite standard material. The errors of sample $\delta^{13}C$ values were less than 1‰ (Nakamura et al. 2004). Finally, the

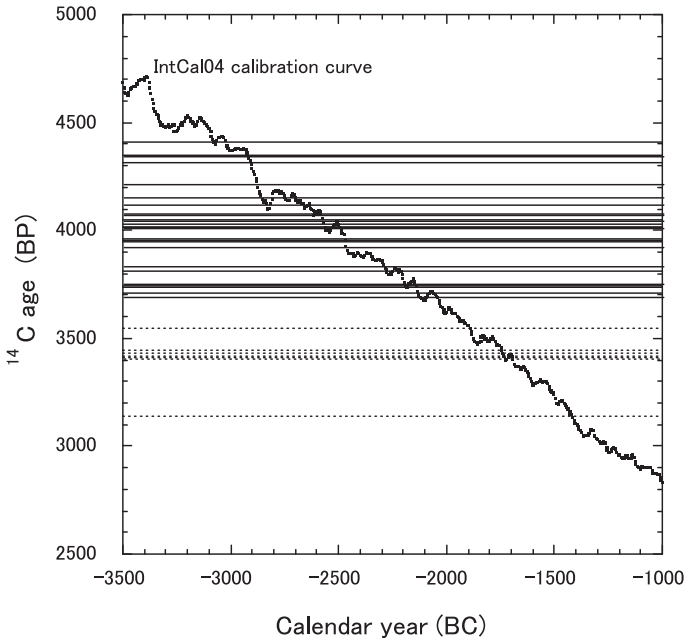

Fig. 4 ^{14}C ages obtained vs. IntCal04 dataset. ^{14}C ages measured in the present experiment are shown in horizontal lines. The solid lines are ^{14}C ages for Square-2 trench, and dotted lines are those for the cairn tombs. Non-linearity of the IntCal04 calibration curve makes the calibrated calendar age range separated into plural possible regions for most of the samples as shown in Fig. 5.

conventional ^{14}C age was calculated using the Libby's half-life of 5568 years and given in years before AD 1950, as summarized in Tables 1 and 2 for samples from the Square-2 trench and from the cairn tombs in the desert, respectively. The errors of ^{14}C age cited here are from one standard deviation. The obtained ^{14}C age was calibrated to calendar date by using a calibration program OxCal04 (Bronk Ramsey 1995; 2001) and IntCal04 calibration data set (Reimer et al. 2004), as given in Tables 1, 2 and in Fig. 5.

4. Results and Discussion

The ^{14}C ages obtained for charcoal samples from the Tell Ghanem al-Ali site and the cairn tombs range from 4400 to 3140 ^{14}C BP. The ^{14}C ages obtained are compared with the IntCal04 data set in Fig. 4. The IntCal04 calibration curve compares a calendar age of a group of decadal tree rings that was determined mainly by dendrochronology, with ^{14}C ages measured on the decadal tree rings, as shown by dotted curve in Fig. 4. In the figure, ^{14}C ages measured for charcoal samples in the present experiment are shown in horizontal lines. Non-linearity of the IntCal04 calibration curve, in particular, a V-shaped fluctuation of ^{14}C age at around 2850–2800 cal BC, makes the calibrated calendar age range separated into plural possible regions for some samples (Fig. 5).

As shown in Fig. 5, for charcoal samples collected from the Square-2 trench, calibrated calendar dates get older successively as the sampling layers get lower from the uppermost construction level (Level-1) to the lowermost level (Level-8), from 2350 cal BC to 3100 cal BC. A group of samples named "uppermost layer" in Table 1, i.e., 7 samples of GA-S2–22, -26 to -31, were collected originally from the sediment layers covering the construction Level-5 and Level-6 (Fig. 3). However, ^{14}C ages measured for the samples were far younger than those for the samples belonging exactly to Level-5 and Level-6. Since the 5 samples of GA-S2–27 to -31 were collected from a clear dark and horizontal layer possessing charcoal abundantly, we consider that this layer had been formed by strong human activities at that time (Fig. 3). In other wards, it is proved that human occupation

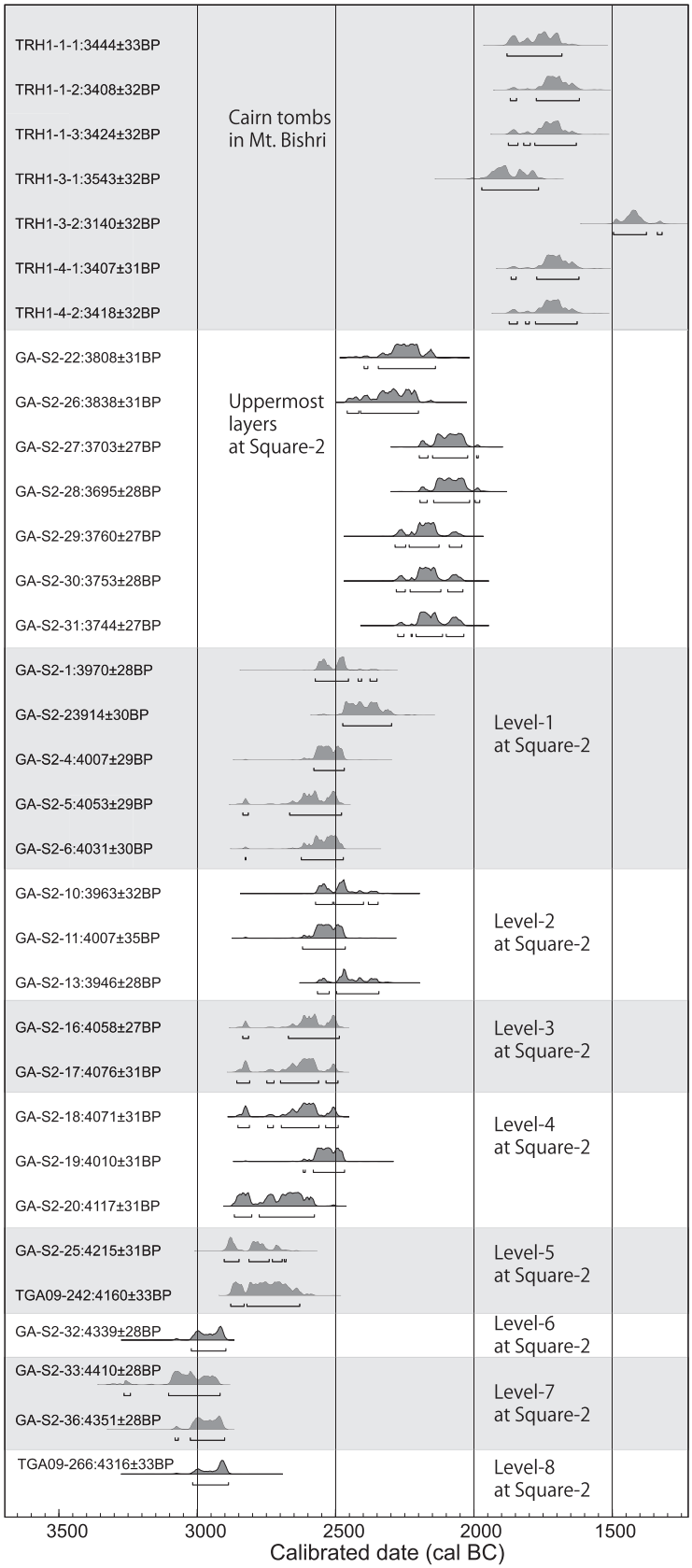

Fig. 5 Probability distribution on calibrated dates of ^{14}C ages measured for charcoal fragments collected from the Square-2 trench and the cairn tombs at the Tor Rahum-1 site. Bars under the probability distributions of the samples indicate the possible calendar age ranges for 2σ uncertainty.

or at least frequent visit at this site had lasted till around 2050 cal BC. The sample GA-S2–25 from Level-5 and the sample GA-S2–32 from Level-6 were collected at the deeper horizons than other respective samples (Fig. 3), and show ^{14}C ages far older than those of the samples from the upper layers, as suggested above. Thus we consider that these two samples were collected from the layers accumulated originally. The sample GA-S2–32 was collected in association with a cooking pot excavated from the floor of Level-6. The ^{14}C age for the sample GA-S2–32 will provide an accurate age of the pot.

The chronology of the 8 construction levels and uppermost layer deposits at Square-2 trench is summarized as follows (Table 3); Uppermost layers: 2400–2050 cal BC; Level-1 to Level-2: 2650–2350 cal BC; Level-3, -4: 2850–2500 cal BC; Level-5: 2900–2650 cal BC; Level-6, -7, -8: 3100–2900 cal BC. Thus the age of the lowest level at the present study possibly dates back to 3100–2900 cal BC, and these figures can be older than the oldest limit of the EB period (EB period normally rages from 3000 BC to 2000 BC in Syria, as illustrated in Fig. 6 by Anastasio et al. (2004)).

^{14}C ages for charcoal samples collected from the cairn tombs in the desert area form a group at around 3410–3540 ^{14}C BP, except for one age as young as 3140 ^{14}C BP (Table 2). The calibrated calendar dates for these samples (Fig. 5), ranging from 1950–1600 cal BC (Table 3), coincide with a period of an early part of the Middle Bronze age. The calendar dates for the cairn tombs are all younger than those for the Tell Ghanem al-Ali site, and both dates continue smoothly from the latter to the former. This suggests the possibility that human who had dwelled at the lowland area along Euphrates River, the Tell Ghanem al-Ali site, from 3100 cal BC to 2350 cal BC, and left at least the evidences of strong activities there from 2400 cal BC to 2050 cal BC, migrated to the highland area at around 2000 cal BC. The migrated people lived in the highland (presently desert area) for a few hundred years at around 1950–1600 cal BC. We still do not know the reason why people moved from the lowland to the highland areas.

Table 2 $\delta^{13}C$ value, ^{14}C age and calibrated dates for charcoal samples collected from cairns Nos. 117, 130 and 131, at the Tor Rahum-1 site in the Bishri Mountains on the Middle Euphrates

No.	Sample No.	Cairn no.	Location no.	Sample material	$\delta^{13}C_{PDB}$* (‰, ±1σ)	^{14}C age (BP, ±1σ)	Calibrated age (calibrated with IntCal04, 2σ range with probability in %)	Lab # (NUTA2-)
1	TRH1-1-1	BC-117	110	charcoal	–11.0±1.0	3444±33	1881–1683 cal BC (95.4%)	14382
2	TRH1-1-2	BC-117	110	charcoal	–10.0±1.0	3408±32	1869–1847 cal BC (3.3%) 1775–1620 cal BC (92.1%)	14383
3	TRH1-1-3	BC-117	110	charcoal	–10.5±1.0	3424±32	1876–1842 cal BC (9.0%) 1821–1797 cal BC (3.8%) 1781–1631 cal BC (82.6%)	14364
4	TRH1-2-1	BC-130	502	charcoal	–13.1±1.0	3520±37	1943–1746 cal BC (95.4%)	14454
5	TRH1-3-1	BC-131	106	charcoal	–11.5±1.0	3543±32	1972–1767 cal BC (95.4%)	14376
6	TRH1-3-2	BC-131	106	charcoal	–11.7±1.0	3144±32	1496–1377 cal BC (91.1%) 1338–1321 cal BC (4.3%)	14377
7	TRH1-4-1	BC-131	504	charcoal	–9.6±1.0	3407±31	1866–1848 cal BC (2.5%) 1774–1621 cal BC (92.9%)	14378
8	TRH1-4-2	BC-131	504	charcoal	–10.9±1.0	3418±32	1873–1844 cal BC (6.5%) 1814–1801 cal BC (1.9%) 1778–1628 cal BC (87.0%)	14381

*) defined as $\delta^{13}C_{PDB} = [(^{13}C/^{12}C)_{sample}/(^{13}C/^{12}C)_{PDB} - 1.0] \times 1000$ (‰), where $(^{13}C/^{12}C)_{sample}$ and $(^{13}C/^{12}C)_{PDB}$ mean the carbon stable-isotope ratio for a sample and a Pee Dee Belemnite standard material, respectively. The values were measured by a Tandetron AMS system of Nagoya Univ. on graphite material synthesized from CO_2, with one-sigma uncertainty of ±1 ‰ (Nakamura et al. 2004).

The δ^{13}C values for charcoal samples from the Tell Ghanem al-Ali site are from –24 to –28‰, except for two values of –12.3 and –17.4‰ as shown in Table 1. On the other hand, those for the samples from the cairn tombs are from –10 to –12‰ (Table 2). The δ^{13}C value suggests that most of the charcoal samples from the Tell Ghanem al-Ali site originate from C3 plants (with δ^{13}C value of ca. –26.5‰) that grow under the moderate weather, and all the charcoal samples from the cairn tombs originate from C4 plants (with δ^{13}C value of ca. –12.5‰) that grow preferably in the arid area with relatively high-temperature. Two charcoal samples from the Tell Ghanem al-Ali site with higher values of δ^{13}C may have originated from plants that had grown in the desert area. The result on δ^{13}C analyses may suggest that the cairn tombs were constructed in the arid environment. For the more detailed discussion, the identification on species of the plants that formed the charcoal materials that are analyzed for δ^{13}C values and ^{14}C ages in this experiment is to be performed.

Table 3 Absolute dates deduced from AMS ^{14}C ages, of construction levels at the Square-2 trench at Tell Ghanem al-Ali site and cairn tomb deposits at Tor Rahum-1 in the desert area of the Bishri Mountains on the Middle Euphrates

Construction level/deposit	Calibrated date
Cairn deposits:	
Tor Rahum-1:	1950–1600 cal BC
	(TRH1-3-2:1500–1400 cal BC)
Square-2 trench at Tell Ghanem al-Ali:	
Uppermost layer:	2400–2050 cal BC
Level-1, -2：	2650–2350 cal BC
Level-3, -4：	2850–2500 cal BC
Level-5：	2900–2650 cal BC
Level-6,-7, -8：	3100–2900 cal BC

5. Summary

We have conducted ^{14}C dating analysis on 26 and 7 charcoal samples collected from the Square-2 trench at the Tell Ghamen al-Ali site and the cairn tombs in the Bishri mountains, respectively. The ^{14}C chronology constructed by the present study suggests that human occupation or at least strong human activities lasted from 3100–2900 cal BC at the oldest level to 2400–2050 cal BC at the youngest level at the Tell Ghanem al-Ali site. Since the pottery fragments collected on the surface of the Tell before the excavation surveys as well as those collected from the sediments during the present excavation were assigned to the periods of EB-IV and EB-III (Kiuchi 2007; Ohnuma and Al-Khabour 2008a), the archeological chronology is almost consistent with the ^{14}C chronology. However, the age of the oldest levels (Level-6, -7 and -8) at the present study dates back to 3100–2900 cal BC,

<table>
<tr><th colspan="2">Dates (BC)</th><th rowspan="2">Historical Terminology (south)</th><th colspan="3">Bronze Age</th><th colspan="2">Early Zazirah</th><th colspan="2">N.-W Syria</th></tr>
<tr><th>Mid. Chron.</th><th>Short Chron.</th><th>Palestine</th><th>Syria</th><th>Turkey</th><th>Lebeau 2000</th><th>Pfälzner 2001</th><th>Amuq</th><th>Hama</th></tr>
<tr><td>3000~2900</td><td>2900~2800</td><td>Jamdat Nasr</td><td rowspan="2">EB II</td><td>EB I</td><td>EB I</td><td>0</td><td>0</td><td rowspan="2">G</td><td rowspan="6">K</td></tr>
<tr><td>2900~2700</td><td>2800~2600</td><td>ED I</td><td rowspan="5">EB II</td><td rowspan="4">EB II</td><td>I</td><td>I</td></tr>
<tr><td>2700~2600</td><td>2600~2500</td><td>ED II</td><td rowspan="4"></td><td>II</td><td>II</td><td rowspan="4">H</td></tr>
<tr><td>2600~2500</td><td>2500~2375</td><td>ED IIIa</td><td rowspan="3">EB III</td><td>IIIa</td><td rowspan="2">IIIa</td></tr>
<tr><td>2500~2350</td><td>2375~2050</td><td>ED IIIb</td><td>EB IIIA</td><td>IIIb</td><td>IIIb</td></tr>
<tr><td>2350~2170</td><td>2230~2050</td><td>Akkadian post-Akkad</td><td>EB IV</td><td>EB IVa</td><td>EB IIIB</td><td>IV</td><td>IV</td><td>I</td><td rowspan="2">J</td></tr>
<tr><td>2170~2000</td><td>2050~1940</td><td>Ur-III</td><td>(EB-MB) MBI</td><td>EB IVb</td><td>EB IIIC</td><td>V</td><td>V</td><td>J</td></tr>
</table>

Fig. 6 Simplified chronology of the Early Bronze Age in the 3rd Millennium BC (cited and modified from Anastacio et al. (2004)).

and these figures are older than the oldest limit of the Early Bronze Age period (EB period is normally accepted to the age range from 3000 BC to 2050 BC in Syria, as given in Fig. 6 by Anastasio et al. (2004)).

The calibrated calendar dates for the samples from the cairn tombs in the Bishri Mountains (Fig. 5), ranging from 1950–1600 cal BC, coincide with a period of an early part of the Middle Bronze Age. Thus the calendar dates for the cairn tombs are all younger than those for the Tell Ghanem al-Ali site, and both dates continue smoothly from the latter to the former. This suggests the possibility that human who had dwelled at the lowland area along Euphrates River, the Tell Ghanem al-Ali site, from 3100 cal BC to 2050 cal BC, migrated to the highland area and lived there at around 1950–1600 cal BC.

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MATÉRIEL POUR L'ÉTUDE DE LA VILLE EN SYRIE
(Deuxième Partie)[1]

URBAN PLANNING IN SYRIA DURING THE SUR
(Second Urban Revolution)
(Mid-third Millennium BC)[2]

Michel AL-MAQDISSI*

I. Introduction

The purpose of this paper is to deal with coastal Syria, the central part of the Orontes valley and the Akkar Plain. At the end of this paper I will give my thoughts on the Second Urban Revolution.

Two major urban centers and one region will be described: Tell Siannu in the region of Jableh, Mishirfeh, 20 km north-east of modern town of Homs and the Akkar plain (ancient Ammuru).

In effect, the latest results from the field by Syrian expeditions confirm the importance of western Syria in the third millennium BC, above all during the Early Bronze Age III and IV.

Deep soundings carried out prove that urban planning at several inland and coastal sites bore a direct relation to the effects of the Second Urban Revolution, starting in the country after 2,600 BC.

II. Tell Siannu and the plain of Jableh

Tell Siannu (Fig. 1) is located at the centre of the Jableh plain, 7 km east of the homonymous city and approximately 40 km to the south of Ugarit. The site has been excavated by Syrian teams since 1990; fieldwork was supervised by the late Dr Adnan Bounni. Finds and the analysis of the area B and area A sequences reflect a very long stratigraphy starting in the fourth millennium BC with very flimsy occupation, followed by a hiatus and a period of very substantial urban reoccupation in the mid-third millennium. The latter is characterized by four phases of settlement with monumental architecture. Level 10, discovered almost directly under the tell's surface, shows urban architectural planning which includes streets and five buildings[3].

Immediately under level 10, a large mud-brick building (Fig. 2) is associated with many small finds, including a stamp seal reflecting a form of administration whose inner workings remain elusive.

Additionally, in Area A, excavations have yielded a wealthy set of finds. The excavated building includes a huge wall more than 10 meters in length, associated with four massive pilasters, similar to the monumental *temenos* at Tell Yarmouth in Palestine[4]. This discovery could be of utmost importance, since at Tell Siannu in this period two administrative buildings are found. This demonstrates the commanding position of the site during the second urban revolution.

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1 Al-Maqdissi 2008 (b).

2 I would like to thank Georges Mouamar, PhD in Archaeology at the Lyon II University (Maison de l'Orient), Kate Kelley, BA in archaeology at the University of British Columbia, and Martin Makinson (University of Geneva), for the help to make this article.

3 Al-Maqdissi 2006 and Al-Maqdissi 2008 (c).

4 Al-Maqdissi and Kanhouche 2009.

Fig. 1. Tell Siannu, aerial view of the site © DGAM-Syria.

Analysis of the stratigraphy (Table 1) shows that urban reorganization took place immediately after 2,600 BC. A decline appears somewhere around 2,200 BC. This observation is corroborated by results from other sites in the vicinity like Tell Tweini[5] and Tell Sukas[6]. If combined, these show that the plain of Jableh was urbanized in the same period. Results from different coastal sites, such as those from Tell 'Arqa[7], Tell Kazel and the regional survey of the 'Akkar plain have yielded similar data. Likewise, the great Mediterranean harbour of Byblos began its intensive trade activities with Egypt more or less at the same time.

In order to support our reconstruction of the trade network, one can quote evidence from a single tablet discovered in Tell Siannu in proper stratigraphic context. This text can be attributed by Professor Dominique Charpin to the 18th century B.C. (MB II) and shows paleographical features quite comparable to those of the Tell Hariri-Mari archive. This economic document gives a list of trade goods circulating through three ancient Near Eastern lands: Egypt (Misru), Cyprus (Alašiya) and Subartu (probably the Hurrian lands of northeastern Syria – i.e. the Jezira)[8]. A deeper study of this Akkadian cuneiform tablet reveals the strategic position of cities of the central Levantine and northern Syrian coast and their crucial role in international trade. They confirm that ports founded during the second urban revolution (i.e. the EB III) were in full expansion in the MB and played a decisive part in Eastern Mediterranean exchange. This prosperity of third and second millennium harbours lasted until the arrival of Sea Peoples from the Aegean and the destruction of Ugarit c. 1,185 B.C. The importance of trade in the second millennium is evidenced by spectacular imports

5 Bretschneider and Van Lerberghe 2008.
6 Oldenburg 1991.
7 Thalmann 2006.
8 Charpin 2004.

and tablets from Ras Shamra and by a single epigraphic find from the excavations of Sidon carried out by Dr. C. Doumet-Serhal, with a Lebanese-British team.

The Jableh plain is therefore an important intermediary between inland Syria and the Mediterranean. The sites of Qala'at ar-Rus to the north[9], Tell Tweini, Jableh and Tell Sukas in the center of the plain, and 'Arab al-Mulk and Tell Darruk[10] in the southern part, must all have been under the political domination of Tell Siannu, a city whose extension and high, prominent location enabled control over the entire coastal strip and the towns below. The Ugarit texts reveal not only the existence of a city called Siannu, but also of a small buffer state with the same name caught in between two Late Bronze age II regional powers, Amurru and Ugarit[11], themselves allies of the major Empires of the day (Hatti and Egypt) [12].

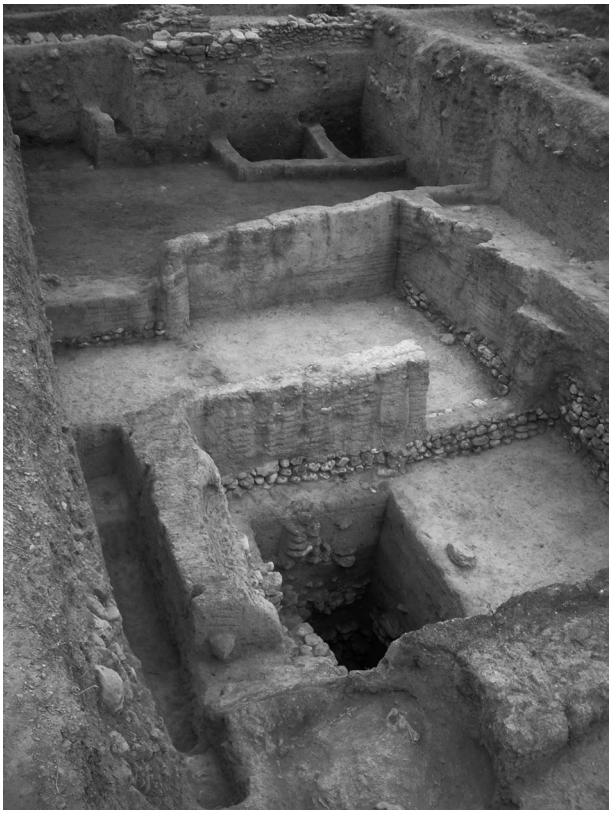

Fig. 2. Tell Siannu, third millennium BC large mud-brick building © DGAM-Syria.

III. Mishirfeh, metropolis on the Orontes and inland Syria

If one looks at inland Syria, especially at the eastern part of the Homs corridor, a comparable situation is apparent. The stratigraphy of Mishirfeh-Qatna underneath the royal palace demonstrates the continuous sequence of urban development from the EB III (c. 2,600 BC) until the end of the third millennium (Fig. 3 and Table 2).

This sequence is important, since it is the consequence of urban expansion and development. During these early times, the city is characterized by a circular plan. The yet unexcavated EB walls probably enclosed an area not exceeding 30 hectares (Fig. 4). Qatna is an archetypal site when it comes to studying the transition from circular, radiating urban planning in the third millennium to rectilinear cities of the second. These changes in planning have already been presented in 2008 in an article published in *Studia Orontica*[13]. I would like to add that this phenomenon is a general rule for practically all of Western Syria. During the entire third millennium, the circular pattern is the dominant urban model, especially if one looks at Tell Rawda, excavated by a Syrian-French team under the joint direction of Nazir 'Awad (DGAM – Damascus) and Corinne Castel (Maison de l'Orient – Lyon). The city, enclosed within circular ramparts, shows a radiating pattern of streets leading to a central monumental building interpreted as a sanctuary[14].

The other site to the south of Mishirfeh-Qatna is Tell Sha'irat (Fig. 5), excavated and surveyed by a Syrian expedition under my supervision. The results are spectacular in that they improve understanding of the development of urban planning in the late third millennium (2,400-2,000, EB

9 Al-Maqdissi 2008 (d).
10 Oldenbung 1991.
11 Freu 2006.
12 Malbran-Labat 2003.
13 Al-Maqdissi 2008 (a).
14 Castel and Peltenburg 2007 and Castel *et al*. 2008.

Table 1. Tell Siannu, stratigraphy of Area B (2007)

Phases	Datation	Niveaux du chantier B
Sianu 0	Moderne XIXe siècle	1
Sianu I	Mamelouke	
	Fosses	2
Sianu II	Romano-Byzantine	–
Sianu III	Hellénistique	–
Sianu IV	Fer III-Phénicien tardif	3
	(Structures domestiques)	
Sianu V	Début Fer III ou fin Fer II	4
	(Structures domestiques	
Sianu VI	Fer II	–
	Hiatus	**Fer I**
Sianu VII	Bronze récent II–III	–
Sianu VIII	Bronze récent I	–
Sianu IX	Bronze moyen I–II	5
	(Structures importantes)	
	Hiatus	**Bronze ancien IV B**
Sianu X C1	Bronze ancien IV A	6
	(Quartier résidentiel)	
Sianu X C2	Bronze ancien IV A	7
	(Quartier résidentiel)	
Sianu X C3	Bronze ancien IV A	8
	(Constructions)	
Sianu X B1	Bronze ancien IV A	9
	(Fosses)	
Sianu X B2	Bronze ancien IV A	10
	(Structures importantes)	
Sianu X A1	Bronze ancien IV A	11
	(Structures importantes)	
Sianu X A2	Bronze ancien IV A	12
	(Structures importantes,bâtiment principal)	
Sianu XI C	Bronze ancien III	13
	(Structures domestiques : sondage)	
Sianu XI B	Bronze ancien III	14
	(Structures domestiques : sondage)	
Sianu XI A	Bronze ancien III	15
	(Structures domestiques : sondage)	
Sianu XII D	IVème millénaire	16
	(Abondant)	
Sianu XII C	IVème millénaire	17
	(Structures domestiques : sondage)	
Sianu XII B	IVème millénaire	18
	(Accumulation de terre rouge : sondage)	
Sianu XII A	IVème millénaire	19
	(Accumulation de terre brune avec trace du feu : sondage)	
	Sol Vierge	

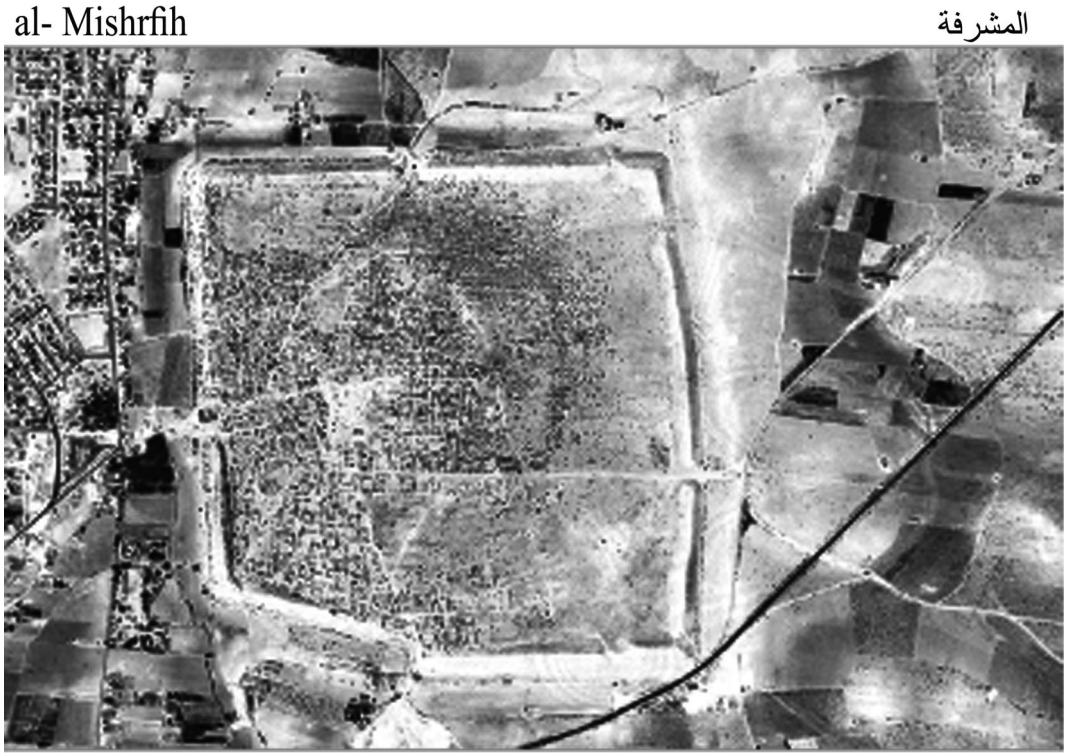

Fig. 3. Mishirfeh, Satellite picture with the circular third millennium BC occupation in centre © DGAM-Syria.

IVA-B). Firstly, the plan is perfectly circular. The centre includes a fortification system, and the lower city also had walls surrounded by a moat; seven city roads lead to the town's centre. The centre probably had monumental constructions, yet to be excavated.

The analysis of quarters in the lower city will enable us to understand the organization of domestic architecture at the end of the Early Bronze Age. Different types of domestic units are known, as well as residences and structures probably religious in nature. The starting point of this type of urban planning is revealed by the stratigraphic sounding carried out on the southern slopes of the upper Tell of Sha'irat. In effect, three important structures in succession were built over each other, forming a seven meter deep stratigraphy spanning the four centuries of the EB IV[15].

In conclusion, one can suggest that during the EB IV, in the western part of Syria circular town planning was coeval with the emergence of the Second Urban Revolution. This form of urban organization disappeared at a time which remains to be more precisely defined, but it is clear that at the very beginning of the second millennium BC, a new form appeared: the rectilinear plan. The latter is probably to be associated to the Amorites and their gradual control of Syrian kingdoms. The most famous example of this change has been referred to previously (Mishirfeh-Qatna): the modifications were accompanied by the re-foundation of a 100 hectare metropolis and the construction of massive 30 metre-high ramparts. The circular plan of the third millennium was integrated within the new urban framework, since the circular third-millennium town became Qatna's new royal citadel, where the king's palaces, those of the nobility and maybe even a temple were built[16].

The same situation might be present at a newly-surveyed site in the region, Tell es-Sur (Fig. 6). Around this 25 hectare third millennium circular city, which includes a fortification system surrounded by a moat, was founded a rectangular town of more than 50 hectares. Nevertheless, the

15 Al-Maqdissi 1995 and Al-Maqdissi 2009 (b).

16 Al-Maqdissi and Souleiman 2008.

Table 2. Mishirfeh-Qatna, Tell Sh'airat and Tell es-Sour, chronology of the IIIrd millennium BC

	Datation	Mishrifeh-Qatna	Tell Sh'airat	Tell Es-Sour
2000	**Bronze ancien IV B**	Mish VI C Mish VI B Mish VI A	Sh'airat II D Sh'airat II C Sh'airat II B Sh'airat II A	Es-Sour VI
2200	**Bronze ancien IV A2**	Mish VII E1 Mish VII E2 Mish VII D	Sh'airat III D Sh'airat III C	Es-Sour VII B
2300	**Bronze ancien IV A1**	Mish VII C Mish VII B Mish VII A	Sh'airat III B Sh'airat III A	Es-Sour VII A
2400	**Bronze ancien III**	Mish VIII Mish IX	–	–
2700	**Bronze ancien I-II**	–	–	–

Sol vierge

circular citadel is adjacent to the newly-built second millennium perimeter wall, and not in the centre of the city. Pottery collected from the excavations in two areas in the circular citadel (Areas A and B) confirms an EB IV date; however ceramics retrieved from the lower rectilinear city show that the city lasted from the inception of the Middle Bronze Age to the end of the Late Bronze[17].

If one attempts to analyze the set of urban foundations of the third millennium in Syria, it is immediately apparent that the dominant form is the circular one. The earliest centers belonging to this type of planning are to be found in the steppe east of the Euphrates and along this river: Tell Hariri - Mari[18], Tell Chuera[19], Tell Beydar[20], Tell Mabtouh Sharqui (Fig. 7), Tell Mabtouh Gharbi and all the other *Kranzhugels* in the dry-farming plains west of the Habour are examples of this new plan. When exactly this concept began is a matter of contention, and it probably started at a different date in each city. For instance, Tell Hariri – Mari, Tell Chuera and Tell 'Ashara[21] became new circular foundations around the beginning of the third millennium[22], while at Tell Beydar this

17 Field excavations in 2009, cf. in general Al-Maqdissi 2008(a).

18 Margueron 1987 and Margueron 2004.

19 Meyer 2007 and Becher, Helms. Possely and Vila 2007.

20 Lebeau et Suleiman 2005 and Lebeau 2008.

21 Buccellati and Kelly-Buccellati 1983.

22 Margueron 2002–2003 and Margueron 2008.

Fig. 4. Mishirfeh, third millennium BC occupation (levels Mish IX-VIII) © DGAM-Syria.

Fig. 5. Tell Sha'irat, aerial view © DGAM-Syria.

Fig. 6. Tell es-Sour, aerial view © DGAM-Syria.

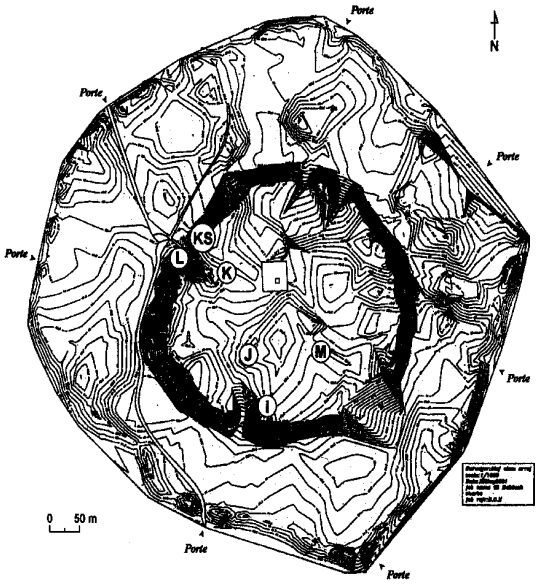

Fig. 7. Tell Mabtouh Sharqui, general topographical map © DGAM-Syria.

process only started in 2,700 BC (during the Early Dynastic/Early Jezira III). However, in western Syria, this type of planning was slightly more recent and a feature of urban culture only in the mid-third millennium. Some foundations were even later and appear, for instance, at Tell Shai'rat and Tell Rawda, only in the EB IV, around 2,400 BC.

All these foundations were intended to create a network of cities with both political and economic links. The cities managed caravan trade with the Mediterranean ports and were meant to be important stopovers on the way to Mesopotamia and the Iranian plateau, these in turn being part of a world system going from Egypt to Bactria and Central Asia. It is thus clear that coastal settlements only developed as urban entities and as ports during the beginning of the Second Urban Revolution, and became very important maritime outposts. Although Byblos' first contacts go back to the reign of pharaoh Khasekhemui (the last ruler of the second dynasty), trade really took off in the late fourth and fifth dynasties (c. 2,600 BC) and reached its zenith under Pepi I (sixth dynasty, c. 2,400 BC) [23]. A recent study of Byblos by Prof. Jean-Claude Margueron has shown that the plan of the city was semi-circular. Enclosed within were the two harbours[24]. The acropolis, centering on the

23 Montet 1960.

24 Margueron 1994.

temple of Balaat-Gebal (constructed around 2,700 BC), was surrounded by a massive rampart, but Margueron has demonstrated that a 30-hectare third millennium lower town was conceived along lines similar to those of urban centers in inland Syria.

IV. The 'Akkar plain

The 'Akkar plain, adjacent to the Syrian-Lebanese border and located on both sides of the Nahr al-Kebir Janoubi (Eleutheros river), shows specific geographic features and is of unusual shape. It is in the form of a perfect triangle with sides measuring 30 km. Surveyed sites of the plain dated to pre-classical periods show that the settlement pattern was already established during the Second Urban Revolution (EB III). This settlement pattern is structured around three major sites: Tell Kazel in the north, Tell 'Arqa in the south and Tell Jammous in the east[25]. Each of these settlements forms the apex of the triangle. Moreover, they are located approximately 20 km from each other, a distance corresponding to a day's journey on foot. A study recently published by J.-C. Margueron on donkey caravan circulation in the Bronze Age has concluded that this is the average distance between two way-stations/stages[26]. One can therefore evaluate the number of stages between the harbor of Byblos and Qatna and pinpoint the thoroughfare linking the later Bronze Age metropolis to the Lebanese coast. I would like to propose the following sites as stepping stones or stages in the caravan trade from Byblos to the Orontes: Batroun (Butruna of the Amarna texts), Tell 'Arda (Irdata of the Amarna tablets), Tell 'Arqa (Irqata of the Amarna texts), Tell Jammous, one other site in the Buqei'a plain which remains to be found, Tell Nabi Mend/Qadesh, the ancient tell in the city of Homs and finally Qatna. Thus eight stages (approximately 160 km) stand between this Bronze Age Syrian capital and the principal Mediterranean harbour of Byblos. This communication network remained unchanged until the beginning of hostilities in the LB II between Egyptians and Hittites and until the foundation by Abdi-Ashirta of the powerful kingdom of Amurru (c. 1,350 B.C.). Following the battle of Qadesh, the region was a frontier buffer zone between empires and was of little commercial interest: the name Amurru is actually rarely attested in written documents of the 13th century B.C. (even if this land is later mentioned as a property of Zakarbaal, king of Byblos in the Wenamon papyrus of 1,080 B.C.).

Before concluding this short presentation of the 'Akkar Plain, I would like to focus on the settlement pattern of the region between the sites of Tell 'Arqa, Tell Kazel and Tell Jammous. Small settlements were all founded in the immediate vicinity of these three local centers and no doubt played an essentially agricultural role; they must have worked as centres for the collection of agricultural produce in order to feed the three above-mentioned cities and their palaces. Worthy of note are, for instance, the two Bronze Age sites (probably villages) of Tell al-Laha and Tell Bseiseh in the immediate periphery of Tell Kazel[27].

V. SUR (Second Urban Revolution) and the trade routes

The trade route runs east of Qatna into the steppe, and wells and water stops are needed. No cities are to be found, but rather punctual stopovers where animals and humans can be watered. Only two major towns lay on this road: Qaryateyn and Tadmor/Palmyra. Soundings made by the late Professor Adnan Bounni in the *temenos* of the temple of Bel[28] in Palmyra have yielded a deep

25 Thalmann and Al-Maqdissi 1989.

26 Margueron 1989.

27 Thalmann 2000.

28 Al-Maqdissi 2000 and Bounni and Al-Maqdissi 2001.

stratigraphic sequence, with spectacular mud-brick constructions first built around 2,500 BC, replaced with later Middle Bronze Age and Iron Age architecture. The nature and function of this EB foundation in the steppe are unknown, since it was partly obliterated by the Hellenistic and Roman period sanctuary[29].

The political geography of the entire western part of Syria[30] was completely altered in the beginning of the Middle Bronze Age (2,000 BC). This had consequences on urban planning, with newly founded towns or many old metropolises becoming rectilinear in shape. The coastal kingdom of Amurru's creation is to be dated to this time, and so is that of Qatna. Both of these states played a crucial role in the control of the Homs corridor at the start of the Amorite Age, just as Yamkhad did between the coast and Ugarit and the Euphrates[31]. The cuneiform archive of Mari gives very precise information on communications and routes during this period[32]. In a letter sent by Samsi-Addu to his son Yasmah-Addu, governor of Mari, precious data is given on the axes of communication linking the middle Euphrates valley to the region of Qatna. This historical document reveals four roads crossing the steppe from east to west: towns and ports like Emar, Tadmor/Palmyra and Qaryateyn/Nazala played a key part as main way-stations in the caravan trade.

In order to give a clearer idea of the urban development and settlement pattern around a central Syrian metropolis, one should return to the area of Mishirfeh. This region, immediately east of the middle Orontes valley, was surveyed in the last ten years by a Syrian expedition. Results confirm that regional integration with a hierarchy of settlement began around c. 2,600. At this stage, the area can be divided into two parts: a northern one dominated by Mishirfeh and Tell Rawda and a southern one around Tell Sha'irat. Settlements around Mishirfeh dotted four wadis running in a north-south direction and reaching the Orontes river. Mishirfeh, almost in the centre of these catchments, was linked to this settlement system by satellite cities (for instance Tell Qdah, Tell as-Sur, Tell Dnebi, Tell Ghazal and even Tell Safinet an-Nouh to the west). These intermediary sites ensured the defense of Mishirfeh, controlling axes of communication leading to the capital. Settlements along the wadis undoubtedly played an agricultural role and were linked to the capital's subsistence. The development of this system was not linear, but experienced periods of expansion and relative decline, yet four periods of major development are apparent: the Early Bronze Age IV, the Middle Bronze and Late Bronze Ages, and the Iron II (900-720 BC). The demise and collapse of the system was the result of Sargon II's ruthless campaigns and the annexation of the region to the Assyrian Empire, following the total destruction of the Aramaean and Neo-Hittite city of Hamath (720 BC). After the eighth century BC, the region lost its importance, and the onus of settlement was displaced towards the Orontes, focusing around Arethusa/Rastan in the Hellenistic period and Emesa/Homs in the Roman and Byzantine periods. Emesa might even have been important in the Late Assyrian period, as shown by a recently published article by M. Makinson, which identifies Emesa with Mansuate, a provincial capital strategically located between the territories of Hamath and Damascus[33].

In order to give an idea of the nature of settlement in the Mishirfeh area during various periods, one should look at Tell Moujwez[34], 10 km to the north-west of Qatna. Agricultural work on the site has a made a 7 m cut (100 meters long), yielding a stratigraphic section reflecting the periods of occupation and hiatuses of the entire region. The second half of the third millennium BC is represented at Tell Moujwez by a very dense pattern of domestic architecture. Houses include plaster

29 Al-Maqdissi 2009 (a).

30 In general cf. Montet 1966 and Tufnell and Ward 1966 (costal region); Fugmann 1958 (Orontes vallay); Weiss 1986, Weiss (ed.) 1986 and Koliński 2007 (eastern region).

31 Al-Maqdissi 2002, Durand 1987, Cooper 2006.

32 Durand 1987.

33 Makinson 2009.

34 Al-Maqdissi in press.

floors as hard as concrete. The section revealed a small palace of the Middle Bronze Age, whose walls were covered with a thick plaster layer and whose rooms possessed benches. The Late Bronze Age is, according to the section, associated to a partly-preserved official building in the eastern part of the cut. Finally, the upper part included houses visibly destroyed by a huge conflagration, in all probability caused by Sargon's Assyrians in 720 BC[35].

VI. Concluding remarks

As concluding remarks to this too brief survey of inter and intra-site settlement patterns, one could say that the coastal ports were urbanized in the mid-third millennium BC at the same time as the inland Syrian capitals. That the two phenomena happened approximately at the same time was the result of regional organization, the consequence of trade between Egypt, Syria and Mesopotamia. This system survived during more than two millennia, until the arrival of Alexander the Great, which created an entirely new conception of settlement and town planning.

Circular plans, which began in the northern areas of the steppe in the early third millennium BC, spread all over Syria. They were coeval with the beginning of the Second Urban Revolution. An entire network of Kranzhugels is found from Tell Chuera[36] in the west to Tell Beydar[37] in the eastern part, on the Habour. In the western part of the steppe, on the edge of inland Syria (the Hama-Homs area) huge circular urban settlements are of much later date.

The disappearance of circular urban sites in the steppe is plausibly related to the Akkadian Empire's demise at the end of the EB IV; on the western edge of the steppe, during the end of the third millennium (EB IVB) this circular model expanded, only to disappear with the arrival of the Amorites at the dawn of the second millennium.

In order to reach this conclusion and to give a clear perspective on circular cities in Syria, particularly in regions on the steppe margins, a preliminary suggestion can be put forward: two regions of development can be clearly distinguished. The first is located to the north of the steppe, the second one on the latter's western margins. The set of available data confirm that the earliest traces of circular cities are in the eastern margins of the steppe, at sites like Tell Chuera, Tell Ashara and Tell Hariri. The date of these early foundations goes back to the inception of the third millennium. This first phase was followed around 2,700 BC in the same area, by a major re-foundation and reorganization of sites, under the form of Kranzhugels, of which Chuera and Beydar are clear examples. This phase is the most crucial one if one studies the development of circular cities. It concerns the entire Jezira and north-eastern Syria.

The third phase can be placed towards 2,500: many re-foundations are attested, as shown by Tell Mabtouh Sharqi. During the Early Dynastic III period, an acropolis was surrounded by a lower city. This process took place until the collapse of the Akkadian Empire, around 2,300 BC. This system totally disappeared after this period. However, if one tries to trace the development of circular cities in the western part of the steppe, one can note that this urban system began a little later. The first urban remains are visible at Tell Mardikh and Tell Mishirfeh[38] around 2,600 BC, but the city's shape is unknown for this early period. The first phase when one can associate with some certainty circular form and urban planning is the mid-third millennium, with a plethora of foundations on the steppe's western margins, with perfect examples found at Tell Sha'irat, Rawda and Tell Sur. This urban system went through a phase of major re-foundation, but was replaced between 2,200 and 2,000

35 Al-Maqdissi 2007.

36 Orthmann 1986, Orthmann 2002 and Meyer 2007.

37 Lebeau and Suleiman 2005 and Lebeau 2008.

38 More information is available by looking at soundings made in the southern section of the Tell Mardikh-Ebla acropolis (Matthiae 1987) and in the reports on work in areas J (Morandi Bonacossi 2008) and R (Al-Maqdissi 2003) at Mishirfeh.

BC by cities rectilinear in shape.

Looking at the development of urban planning in Syria and its two phases in the EB, one can but conclude that circular towns and cities appeared in the eastern part almost half a millennium before those in the steppe's western margins. The decline of urban culture in the east coincides with its full expansion in the west. This leads to a proposal: during the process of desertification following the collapse of the Akkadian Empire, a massive migratory movement depopulated the east in favor of the western part of Syria.

Table 3 is my first proposal to the development of circular town in the third millennium in different regions of Syria around the steppe area.

Table 3. Proposal to the development of circular town in the third millennium in different regions of Syria around the steppe area

Eastern and Northern Syria	**Western Syria**
Phase I: ± 3000 BC First circular town foundation	
Phase II: ± 2700 BC Re-foundation *Kranzhugels*	
	Phase I: ± 2600 BC First occupation (circular ?)
Phase III: ± 2500 BC Re-foundation ⬇	**Phase II**: ± 2500–2400 BC First circular town foundation
Collapse: ± 2300–2250 BC	**Phase III**: 2300–2200 BC Re-Foundation ⬇
	Collapse: 2100–2000 BC

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VIII. Abbreviations

AAAS	Annales Archéologiques Arabes Syriennes
AoF	Altorientalische Forschungen
Au.Or. Supp.	Aula Orientalis Supplementa
BAH	Bibliothèque Historique et Archéologique
CAAS	Chroniques des Activités Archéologiques en Syrie
CRAI	Comptes Rendu de l'Académie des Inscriptions et Belles-Lettres
DAS	Documents d'Archéologie Syrienne
MARI	Mari, Annales de Recherches Interdisciplinaire
MDOG	Mitteilungen der Deutschen Orient-Gesellschaft zu Berlin
MUSJ	Mélanges de l'Université Saint Joseph
OLA	Orientalia Lovaniensla Analecta
PCEP	Publications of the Carlsberg Expedition to Phoenicia
SAQ	Studi Archeologici su Qatna

BRONZE AGE SITES AROUND THE CITY OF RAQQA

Ahmad SULTAN*

The city of Raqqa is located in the north-eastern part of Syria on the left bank of the Euphrates, along which lots of ancient cultures and civilizations were established including Bronze Age societies.

Because this symposium is focused on ancient tribal communities in the middle Euphrates, I have chosen two important archaeological sites for my talk: Tell Bi'aa and Tell es-Sweyhat (Fig. 1).

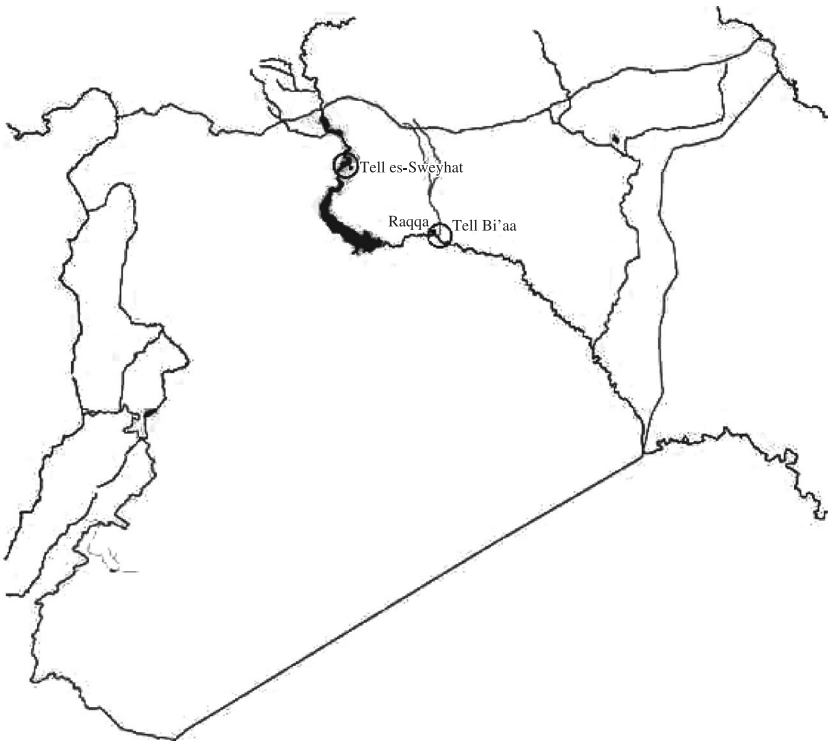

Fig. 1 Location of Tell Bi'aa and Tell es-Sweyhat.

Tell Bi'aa

Tell Bi'aa (Tuttul) is located to the north of Raqqa, 3 km to the north of the Euphrates and 3 km to the west of the Balikh (Fig. 2). An old channel ditch dated to the third millennium B.C. goes through the site.

The ruins of Tell Bi'aa revealed the features of an old large city with a central mound, surrounded with a wall, 700 by 800 m. A German expedition directed by Eva Stromenger excavated Tell Bi'aa since 1980.

Later, palaces were discovered which provided imporatnt information on the history of Tell Bi'aa. The texts discovered in Tell Bi'aa (Fig. 3) show religious, economical and political importance of Tuttul.

Tuttul had distinguished relationship with south Mesopotamia and Ilam. Strong relationships were also noticed with Babylon and Assyria.

* Directorate General of Antiquities and Museums, Syria

Fig. 2 General view of Tell Bi'aa (center).

Fig. 3 The texts discovered in Tell Bi'aa.

Tuttul started to lose its importance gradually after the mid 2nd millennium B.C. It was last mentioned in the texts in the twelfth century B.C. as a bordering center with the Hittite Assyrians, and vanished permanently in the later periods.

Tell es-Sweyhat

Tell es-Sweyhat is located in the middle of an open meadow (Fig. 4), surrounded by mountain-like hills contrasted to the Euphrates river bed. Around this site, many important archeological mounds are located. The site is on the left bank of al-Assad lake, just on the modern administrative point between Aleppo and Raqqa. It is 95 km north-west of Raqqa, 110 km from Aleppo, 65 km downriver from Jerablus (ancient Carchemish) and 2 km from al-Assad lake.

An American expedition started the excavations at this site in 1973–75. In 1990, the excavation was resumed under the direction of Tom Holland and Richard Zettler. This excavation has been continuing under the direction of Michel Dantti.

Tell es-Sweyhat is a small Bronze Age site, tucked into a small embayment formed by steep bluffs rising up to the Syrian desert. It stands in the center of a plain formed by a broad crescent-shaped embayment in the Euphrates-Balikh uplands. Today, the plain borders the northern end of Lake Assad behind the hydroelectric dam at Tabqa.

The plain around this site has a mean annual precipitation of 200–300 mm, with relatively high inter-annual variability of 25 to 35 percent. These factors place this plain at the southern limit of the semi-arid "transitional zone" between the desert steppe (Arabic badiyah) and the better-watered lands of northern and western Syria. The plain comprises some 4800 ha of arable land, and it falls in Zone 3, where one or two barley harvests are expected every three years, according to the Syrian government's classification of agricultural land. These suggest dry farming in this plain, and pastoralism was probably a critical part of the subsistence economy in the past as it is today.

Indeed, some combination of small-scale, non-intensive agriculture and pastoralism may have been the most probable long-term subsistence strategy in such a marginal environment.

Tell es-Sweyhat is composed of three distinct morphological zones as below.

(1) A central high mound 5–6 ha in area and 15 m in height.
(2) A lower tell surrounding the high mound. It is enclosed by a low rise or embankment that approximates a rectangle 700 by 600 m. The lower town is ca. 30 ha in area.
(3) An area to the south of the lower town ca. 10 ha in area. Though unvisible on the ground, low-level aerial photographs of the site show a dark line, most probably a rampart or wall enclosing the area.

Most of the scholars who worked in this area believe that Tell es-Sweyhat had the city of Burman inside it because of historical sources mentioning the city of Burman. After its king married the famous princess Zmini Kobar, the daughter of the king of Ebla, the city of Burman became the most important city in Syrian Jazeerha. And, the kingdom of Ebla depended on Burman in growing their cattle during the mid-third millennium B.C.

Tell es-Sweyhat was occupied from the beginning of the third millennium B.C. Initially, it was a relatively small village located in the area of the central mound. The settlement may have encompassed an area of 15 ha by the mid-third millennium, and tripled in size by the end of the third millennium and became an urban state center. The original settlement became a fortified center

Fig. 4 General view of Tell es-Sweyhat.

or citadel, and a substantial outer (lower) town emerged around it.

The entire site was enclosed by a wall at that time. The survey data suggest that the late third millennium represents a peak period of the settlement, not only at Tell es-Sweyhat but on the plain around it on the whole, with at least one major site, Nefileh and Tell Othman in the embayment for example.

Archaeological surveys have identified traces of roadways linking the sites in the embayment, as well as a zone of intensively cultivated lands around Tell es-Sweyhat and possibly around Nefileh.

Tell es-Sweyhat collapsed probably in the early second millennium, but the site continued to be occupied in the Early Bronze - Middle Bronze transitional period. As its population decreased markedly, the settlement retracted to the area of the central mound. Because no Middle Bronze IIB ceramics have been recovered from excavations or surface surveys, this site was abandoned not later than 1800 B.C. The "collapse" of this site coincided with the reoccupation of sites such as Tell Mardikh and Tell Leilan, paralleling the contraction or collapse of settlement in the Birecik-Carchemish areas.

A thousand years after its collapse, Tell es-Sweyhat was reoccupied in the Hellenistic to the late Roman period.

Tell es-Sweyhat is surrounded with many cemeteries consisting of 100 to 150 tombs. In summer of 2008, the guard of this site informed the directorate of antiquity of Raqqa that there were many holes under the barley fields next to the tell. After checking the area, the Syrian expedition confirmed that the irrigation water had unveiled five deep holes in the ground some 200 m south of the tell (Figs. 5 and 6).

From these holes they found deer figurines made of bronze (Fig. 7). In addition to jewelry, these tombs yielded pins for securing garments or shrouds, daggers (Fig. 8), axes, spear butts, bone cosmetic containers with incised designs, a model of a four-wheeled wagon and a large number of pottery vessels with different sizes and shapes (Figs. 9 and 10).

Judging from the pottery unearthed, these tombs date to 2500–2250 B.C., consisting of 2 meter deep rectangular shaft leading to an oval chamber, 4 by 5 meters. The chambers are high enough for us to stand up inside, but their tops are 2.5 meters below the ground. The tombs are cut into sterile soil and are stable.

The archaeological findings discovered in these tombs constitute a harmony group, and in particular the pottery helps us to date the tombs. On the basis of the study of the pottery products, we can date the tombs to the mid-third millennium EB4a.

The archaeological evidences demonstrate that this type of tombs stretched along the Orontes river. And, we can make comparison between Tell es-Sweyhat tombs and those stretched along the middle Euphrates region like Tishreen dam sites including Tell Basi, Qara Quzaq, Tell Kabir, Tell albanat. Also comparable are Altabaqa dam sites including Tell Hadidi, Tell wreide, Tell Shiekh Hassan, Halawa, Tell Selenkahiyé and Tell munbaqa.

Fig. 5 One of the five holes confirmed as graves of Tell es-Sweyhat.

Fig. 6 One of the graves of Tell es-Sweyhat.

Fig. 7 Deer figurines made of bronze from the graves of Tell es-Sweyhat.

Fig. 8 Bronze daggers from the graves of Tell es-Sweyhat.

Fig. 9 Pottery discovered inside one of the graves of Tell es-Sweyhat.

Fig. 10 Collection of pottery from the graves of Tell es-Sweyhat.

THE CEMETERY OF ABU HAMAD: A BURIAL PLACE OF PASTORAL GROUPS?

Jan-Waalke MEYER*

In 1989, the Syrian Antiquities Department offered Prof. Dr. Winfried Orthmann, at the time of Saarbrücken University, a participation in rescue excavations to be undertaken in an extensive necropolis near the modern village of Abu Hamad, ca. 40 km east of Raqqa. Large-scale lootings had resulted in the plundering of a great number of graves. In 1990 already, from March 26 to May 7, a Syrian-German joint project was conducted under my direction, with, as Syrian partner, Murhaf al-Halaf[1]. Part of the funds came from private German sponsors. Six weeks of work have been laid down in a short résumé and a monograph concerned with the finds and findings[2].

The cemetery of Abu Hamad is situated on the uppermost river terrace, right at the eroded edge above the Euphrates valley and east of the road leading, near the village of Ghanem Ali, from the main connection Raqqa - Deir ez-Zor south towards the Gebel el Bishri[3].

Close to the edge, the terrain is rather badly broken up by erosion, but then turns into a plain, which stretches to the foot of the Bishri-mountains and is only interrupted by some shallow wadis.

As far as is visible on the surface and by the looters activities, the cemetery extends about 2 km from north to south, and 1.5 km from east to west (Fig. 1). However, the graves do not cover the complete territory but are obviously gathered in separate, closed areas - in the following called necropolises and designated by the letters of the alphabet.

The necropolises, such as A and M, are installed on natural elevations but also on relatively shallow terrain, as, for example, necropolises J and Z.

With about 3 square kilometres, the cemetery of Abu Hamad is certainly among the most extensive in Syria. Also its topographical position, immediately above the settled river valley and at the margin of a plateau not suited for intensive agriculture, is quite extraordinary.

All larger cemeteries known from this region are situated outside the settlements but still in rather close proximity, as is the case, for example, in Tell Bi´a[4], Shameseddin[5], Djerniye[6] or Halawa[7] - there right at the town-wall -, and also in Djefle with the cemetery of Tawi[8] or in Selenkahiye with

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1 As archaeologists working in the field the team included - beside the author - M. al-Halaf and M. Muktash (Raqqa), A. Egold (Saarbrücken) and E. Vila (Saarbrücken, Frankfurt/Lyon), the latter also working as archaeozoologist. M. Kaushnaw Hamo (Aleppo) documented the architectural findings, M. Wagner (Gießen) evaluated the anthropological material. H. Orthmann (Saarbrücken) and I. Norbi (Paris) took care of the indoor work. The topographical plan on which the fieldwork relied has been surveyed and mapped again by Prof. Dr. W. Orthmann on the basis of the official map of the upper Euphrates region.
Many thanks go to the Syrian Antiquities Department, especially to Dr. Ali Abu Assaf, director at the time, and to Dr. Adnan Bounni for their immediate and generous support, as well as to all participants without whose unflagging exertions it would not have been possible to achieve - in the short time span available - the results that are here presented. Finally, I have ti thank Brigitte Finkbeiner for the translation into english.

2 M. al-Khalaf, J.-W. Meyer 1993/94:196–200. Falb, Krasnik, Meyer, Vila 2005.

3 Compare the recent work of the Japanese mission in the region of ar-Raqqa, exploring partly the same area like our cemetery, especially Ohnuma, Sultan 2009:192–216.

4 Strommenger/Kohlmeyer 1998. Now, Bösze 2009.

5 Meyer 1991.

6 Meyer 1991.

7 Orthmann 1981.

8 Kampschulte/Orthmann 1984.

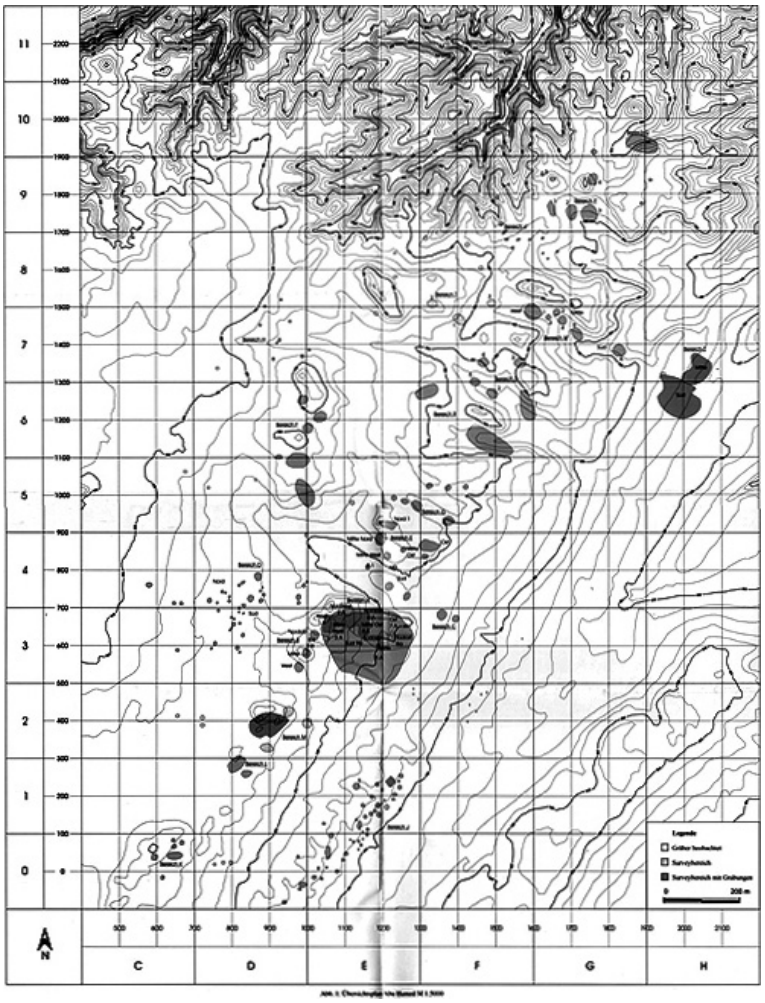

Fig. 1 Plan of the cemetery Abu Hamad.

the cemetery of Wreide[9], or, now attested, in Chuera. Intramural burials exist in this region as well, for example in the already mentioned settlements of Halawa, Selenkahiye[10], Tell Bi´a, but also in Til Barsip[11], Tell Banat[12], Hadidi[13], Jerablus[14] and Mari[15].

While most of the intramural burials come as single graves, the extramural burials are organized in sometimes quite extensive, more or less closed necropolises. However, no other cemetery is as spacious and, above all, as structured as the cemetery of Abu Hamad. In our campaign, we managed to do a thorough investigation of ca. twenty graves, only, and documented almost 300 more, but we assume that, overall, several thousands of graves are distributed in distinctly separate necropolises.

With its distance from the nearest settlement, the topographical position of the cemetery of Abu Hamad may perhaps be compared to the cemetery of Baghuz[16] - somewhat younger, it is true - which lies relatively far from any settlement, too; it also shares with Abu Hamad a rather unusual kind of graves, namely graves covered by a shallow tumulus, in Baghuz with different installations,

9 Orthmann/Rova 1991.
10 Van Loon 1979, 165–185.
11 Thureau-Dangin, Dunand 1936.
12 Porter 1995, 1–50; McClellan/Porter 1999, 107–116.
13 Dornemann 1979, 113–132.
14 Peltenburg 1999, 427–442.
15 Jean-Marie 1999.
16 Buisson 1948.

however.

The cemetery of Abu Hamad has four different types of graves:

Shaft graves, stone cists, earth graves with stone cover, and a combination of the last two grave types, namely graves let into the natural soil (rock) with at least partly built-up side walls.

The largest percentage of graves are shaft graves; this is certainly the case for the factual situation, even if the earth graves with stone cover are possibly underrepresented, because they are not found so easily. The dimensions of the shaft graves are strikingly small, on an average just 1 square metre, rarely more than two square metres.

A larger number of comparable graves is also known from Wreide; in the extramural cemetery U at Tell Bi´a they are in the majority as well[17]. Usually, they have a side chamber - less often two (e.g. Z2): herein comparing to the two cemeteries mentioned above. The side-walls of the chambers are slightly rounded; usually, they are only a bit wider than the shaft. As far as may still be determined, the corpse was laid down in a flexed position - that would also go along with the dimensions - often but not regularly from east to west (the head probably in the east), with the back against the wall. As in Wreide, but in contrast to Tell Bi´a, even those small chambers may house several burials (e.g. Z2), meaning that they were in use over a longer time span.

In addition, there exist a small number of bigger-sized shaft graves (e.g. A4) with a chamber covering more than 5 square metres (up to 11 square metres maximum). Only four examples of those large shaft graves could be ascertained (besides grave A4 only three in necropolis E, namely E45 and the somewhat smaller graves E40 and E47). In the direct neighbourhood there are smaller shaft graves, arranged in such a way that the larger ones appear as the centre of a closed complex of graves.

In the cemeteries of Halawa and Shameseddin, graves of a similar size are the rule, while in Wreide and Tell Bi´a they are lacking so far. All observations made in Abu Hamad and in the other comparable cemeteries suggest multiple burials, again: use over a longer time span.

A second type of grave are the stone cists. Their side-walls consist of dry rubble walling. The best-preserved example of this type that we have documented is grave A5 (Fig. 2); here, the

Fig. 2 Grave A5. Stone cist.

17 Bösze 2009.

long walls even project a little into the interior and are covered with stone slabs. With almost 5 square metres this stone cist belongs to the larger ones of its type, which usually do not cover more than 2 square metres. As a rule, they are single graves, in rare cases, they come in pairs; two (M1) or more (J10, Z8) stone cists may also be put next to each other. In every case, they have probably contained just one burial.

The earth graves and stone cists with a stone cover (E2–3, E10–12) are a possible variant of the stone cists: at any rate, they, too, are rather rare; they differ insofar as their side-walls are not made of stone and they do not reach as deep down. The dimensions and the stone slab covers correspond to a large extent. They may also appear in groups of twos or threes and have been used for single burials.

Here may be added the graves exposed in necropolis J1–9 (Figs. 3–4): they were let down into the natural rock and, if necessary, strengthened by walled-up sides; they were covered with stone slabs and used for single burials. They are, however, seldom larger than 2 square metres.

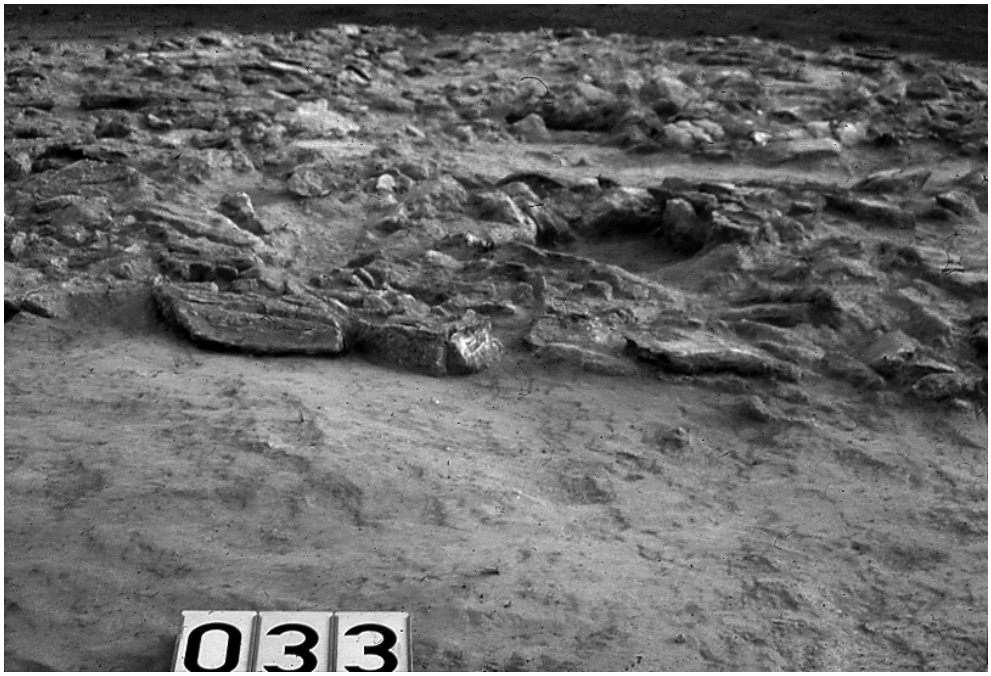

Fig. 3 Grave J1-9. Stone covering.

Fig. 4 a + b Grave J1-9. Stone cists.

Size and method of construction help to establish a hierarchy among the graves: amounting with, all in all, to ca. 2%, the few larger shaft graves, the stone cists proper and the earth graves with stone cover are not very frequent, and they are distributed over the necropolises in such a way as to suggest special burials.

Comparable structures in necropolis A are the stone cists A5 (Fig. 2) and A6, again in the centre of a small tumulus, and the larger shaft graves A4 and A105. As they appear to be solely surrounded by smaller shaft graves, they are, possibly, also at the centre of a complex of graves.

If this assumption is correct, we can delimit complexes of graves with one or more (up to three) central or main burials; this applies also to necropolis M with a central burial in two adjacent stone cists (M1).

Also necropolis J seems to consist of several, but not directly connected, complexes of graves: several stone cists (J10A-C; Fig. 5) or a larger number of single graves (J1–9, Figs. 3–4) are each covered by a tumulus; comparable structures may be expected underneath the other tumuli of this necropolis (cf. also the equally structured necropolises B, C, D, F, H, K, L). It is striking that - at

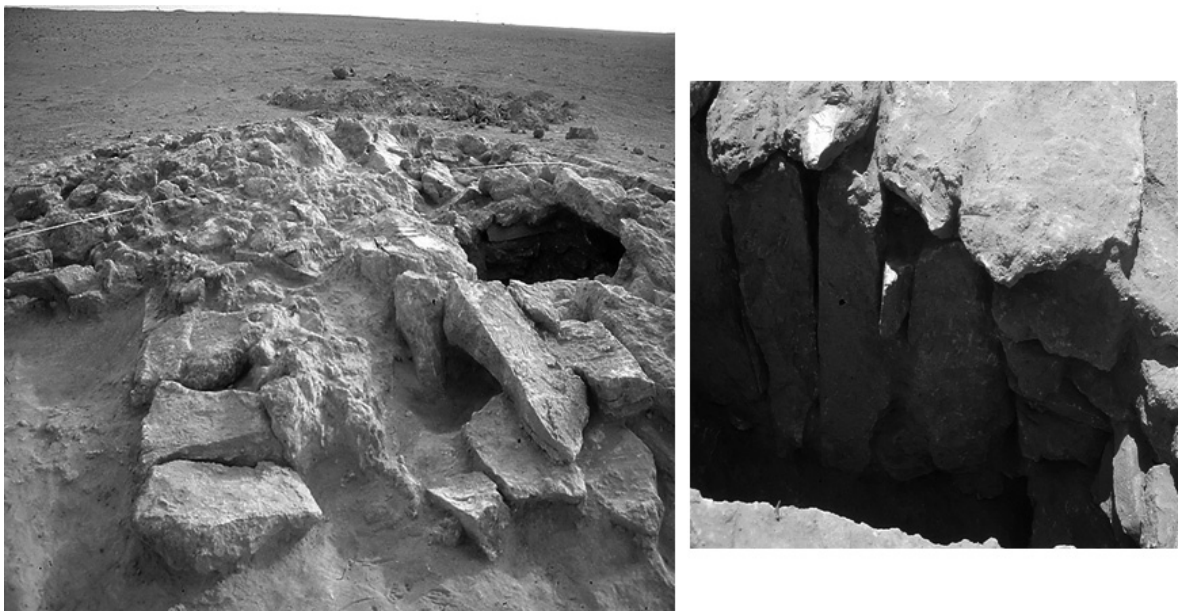

Fig. 5 a + b Grave J10. Stone cist with part of the covering (left) and the slabs of the side wall (right).

Fig. 6 a + b Grave Z6. Entrance (left) and chamber (right).

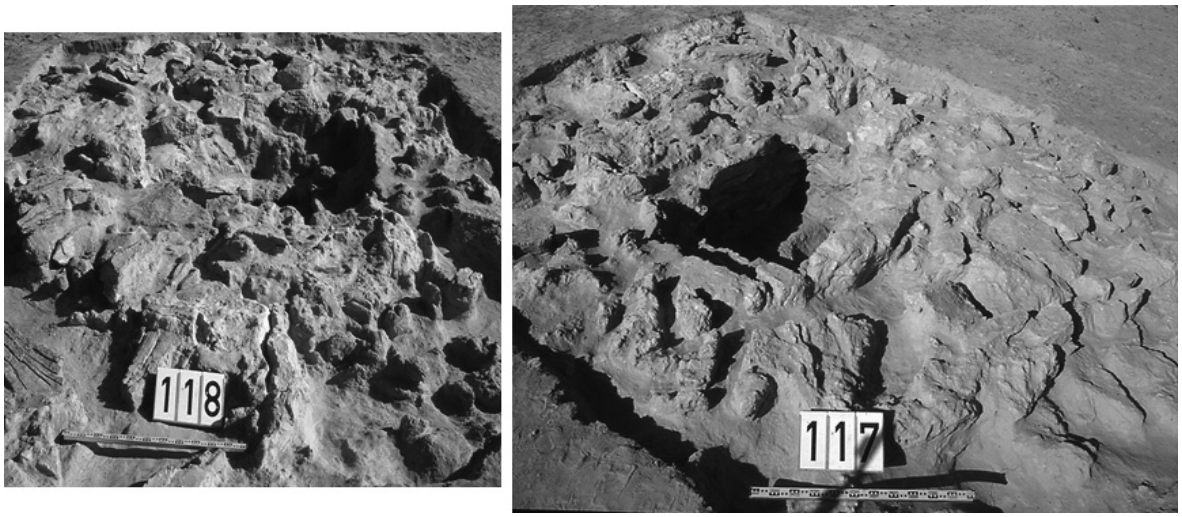

Fig. 7 a + b Grave Z8. Covering (left) and chamber (right).

least in the excavated areas of J - there occur no shaft graves, meaning that there is much homogeneity in the shape of the graves.

Small, closed complexes of graves can also be exposed in necropolis Z; they consist each of two or three smaller shaft graves (Fig. 6) that are situated in close proximity keeping a greater distance to the neighbouring complexes. Grave-shapes do not seem to be mixed in this necropolis, either.

Comparable complexes of single graves are also part of the extramural cemetery U in Tell Bi`a[18]; they contrast sharply with the shaft graves aligned in rows on the cemeteries of Halawa and Shameseddin. In her - recently published - MA thesis I. Bösze has convincingly established the connection of the complexes of graves in Tell Bi`a with burials of the members of (nuclear) families[19]. There is much to be said for interpreting the structure of Abu Hamads necropolis Z accordingly.

Without any doubt, that interpretation also applies to the stone cists consisting of several adjacent chambers covered by a tumulus, e.g. complexes J10 or Z8 (Fig. 7). Finally, the nine graves of complex J1–9 - probably necropolis J in its entirety - and the comparable necropolises B, C, D, F, H, K, L are most likely to reflect family structures.

For a different explanation ask those necropolises and complexes that assemble various shapes of graves, i.e. where the complex is centred around larger shaft graves, stone cists or larger earth graves with stone cover.

In necropolis E, southwest area, for example, a stone cist (E1) is the centre of a small tumulus; in area E south the centre is taken up by two earth graves with stone cover (E2–3), in area E middle west, by an earth grave of the same type, in middle east by one of the larger shaft graves; the central graves are surrounded by small shaft graves. Also in area E middle north there are three comparable complexes of graves the centres of which consist of three earth graves with stone cover (E10–12) or of larger shaft graves (E40, E45).

They are central burials, and, supposedly, the persons buried there had a higher social status or belonged to the entourage (see more, below).

It is, however, not possible to ascertain for each and every burial an orientation towards a main burial. Obviously, the shaft was rather brought down in accordance with the topographical circumstances so that, in general, the preferred east-west orientation was achieved by a chamber laid transversely across the shaft.

18 Strommenger/Kohlmeyer 1998, 82–117.

19 Bösze 2009.

Frequently, access to the shaft was barred by a monolith.

Blockings by stone or mud brick walls occur as well. They may constitute the final closure of the burial chamber, to be erected only when no further burials were to be added to the respective grave. At the same time, the shaft will have been filled up and covered with stones - just as the surroundings of the grave. That made for burial "places" distinctly recognizable on the surface. The larger tumuli were treated in a similar way; they were completely covered with stones, so that they were visible from afar - perhaps heightened by the glittering of quartz of which the stones contained a large percentage.

At any rate, the construction of these graves (larger shaft graves, earth graves with stone cover, stone cists), of these, proposedly, central burials, demanded more work and was more costly (stone as building material). Unfortunately, too few complete inventories are preserved to confirm this supposition. Nevertheless, social distinctions will have become manifest here, expressing a society stratified on the familial and/or the political-ethnic level.

On the basis of the ceramics Ch. Falb has offered a date for the cemetery ranging from the Early Bronze Age III to an early phase of the Early Bronze Age IVA (ca. 2500–2350 B.C.).

In north Syria, this is the period of urbanization and formation of the first states. This process was certainly accompanied by a change in society leading from segmentally ordered tribal groups with agnate relationships, that were exclusively defined via the males, towards a state system controlled by a central power and with cognate relationships derived from the consanguinity of all ancestors. For a certain time span, the original tribal organization of tribe - subtribe - village - lineages (clans) - households remains intact. Every one of those segments brings forth leaders, persons who enjoy status and particular power and who continue to evoke particular relations even after death (ancestor worship). A well-founded economic production does not only further and strengthen the social structure of the respective group but brings about a reflection back to the roots and, thereby, to the central importance of ancestor worship. This practice is especially characteristic of segmental tribal societies, as they are to be expected in the ancient Near East. Every little group of relatives, for example a lineage (clan), worships the most recently deceased ancestor; the same holds true for the other segments.

It may be supposed that the complexes with central burial(s) (e.g. necropolises A, E [several in each], M) point to the special position in their lifetimes of the persons buried there.

Possibly, a comparable differentiation by means of the intra- and extramural burials can be demonstrated for other settlements as well; for example, the inventory of the tomb found inside the settlement of Selenkahiye[20] indicates that the person buried there had a higher status than those buried in the extramural cemetery (Wreide). The same is true for the extra- resp. intramural graves at Halawa; it is obvious for the rich intramural tombs in Banat/Tell Kebir, Til Barsip and Djerablus - even if extramural graves have not yet been determined. The separation is particularly sharp in Tell Bi`a; here the intramural sepulchral structures indicate a higher social status of the persons buried there, compared to those who were buried in the extramural cemetery U. The arrangement in groups (complexes) of the graves in cemetery U corresponds to the underlying familial structures. In Shameseddin as well, the distance between the rows of shaft graves of the larger type and the rows of stone cists is most likely to be seen as a sign of social differences. But nowhere were the cemeteries subdivided into individual, distinctly separate necropolises - as is the case in Abu Hamad.

According to the ceramics this subdivision does not really correspond to the temporal sequence of the burials: at least the more thoroughly investigated necropolises A, E and Z were in use over a longer time span. Supposing the cemetery to have been in use from the Early Bronze Age III down to an early phase of the Early Bronze Age IVA it would extend over a time span of ca. 150

20 Van Loon 1979, 100–102.

years, 5 to 6 generations.

In this context there must once more be mentioned the great distance between the cemetery in Abu Hamad and the nearest settlement, as well as the obviously quite large number of other cemeteries between the river terrace and the Gebel el Bishri in contrast to the relatively few and rather small settlements in the river valley. Right below the cemetery of Abu Hamad lies the settlement of Ghanem al-`Ali[21] - ca. 200 m in diameter, the only settlement to connect with this cemetery; but it remains questionable whether 5 or 6 generations of inhabitants are numerous enough to occupy such an extensive necropolis. Where did the corpses come from?

The interpretation as central cemetery for several settlements does not apply, because the settlement of Mugla as-Sagir[22], which lies only a few kilometres further to the east, will probably have made use of a - looted - cemetery in the vicinity of the Late Roman fortress Gizler[23]. Two other cemeteries, to the east and to the west of Abu Hamad, right at the eroded edge, as well as the cemetery at the foot of the Gebel el Bishri (Ogden) are either associated with a settlement (Ma`adin[24]) or there are no settlements at all to which they might belong.

The proposed structuring of the cemetery of Abu Hamad, namely into isolated necropolises differentiated in those with central burial(s) and those consisting of smaller complexes may be explained as follows: the latter correspond to the almost contemporaneous cemetery U in Tell Bi`a the arrangement of which has been connected to family structures. The necropolises with central burial(s), on the other hand, suggest the presence of larger groups; at the same time, they show signs of a hierarchical order. Accordingly, the burials at Abu Hamad are most likely to take into account kindred groups - family (necropolis Z), extended family (necropolis J) and lineage or clan (necropolises A, E) -, i.e. burials corresponding to the segmental groups of occupational and economic unities.

With all due caution, the burials at Abu Hamad may perhaps be seen to indicate the transition from a nomadic lifestyle (central burial) to a sedentary one of life in villages or towns (family groups). Further on in the Early Bronze Age, the intramural burials reflect a hierarchization of the society, whereas the extramural cemeteries arranged in rows represent the familial level. The presence of nomadic, or, rather, roaming, mobile groups is also supported by the ceramic inventory of the graves: it does not only include wares characteristic of the Middle Euphrates region - such as the Euphrates wares, proper - but also Metallic and Smeared Wash Ware, which point to northeast Syria and west Syria. To date, no other settlement has come up with such a mixture; in Tell Bi`a the Smeared Wash Ware seems to be lacking, in Halawa the Metallic Ware.

Despite massive disturbances in the recent past, the excavations in Abu Hamad have allowed insights - beyond the development of the ceramics - into the obviously quite heterogeneous societal structure in this phase of the Early Bronze Age.

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21 Cf. Kohlmeyer 1986, 111 and appendix 4, no. 13.

22 Cf. Kohlmeyer 1986, appendix 4, no. 64.

23 The tombs there are shaft graves arranged in rows some of which were put to secondary use in Late Roman times.

24 Kohlmeyer 1986, appendix 4, no. 62.

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TRACING TRIBAL IMPLICATIONS AMOMG THE BRONZE AGE TOMB TYPES IN THE REGION OF JEBEL BISHRI IN SYRIA

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with contributions by Kenneth LÖNNQVIST, Markus TÖRMÄ,
Milton NUÑEZ and Margot Stout WHITING

Remote-sensing, surveying and mapping pastoral remains on Jebel Bishri

The Finnish project SYGIS has been remote-sensing, archaeologically surveying and mapping Jebel Bishri with GIS (Geographic Information Systems, see, e.g., Lönnqvist and Stefanakis 2009) since 1999/2000 (Fig. 1). Through the surveyed sites the project has concentrated on studying the relationship between pastoral nomads of the mountain and the village life in the Euphrates valley throughout the ages. In this short paper our aim is to trace tribal features in the Bronze Age tomb types met within the region of Jebel Bishri.

In the Mesopotamian cuneiform sources the region appears as the central habitat of the Amorites (Buccellati 1966: 236–237) and Ahlamu-Arameans (Kupper 1957: 110). It is known that both of these groups consisted of various tribes. *Transhumance* is a typical mode of pastoralism in the region today, but it has not necessarily always been such as the historical evidence only reaches as far back as to the Mari archives (ARM) dating from the Middle Bronze Age. Nowadays the mountain mainly belongs to the territories of the Fid'ān Bedouin tribe, but also the Sba'a, Amarat and Agedat tribes use the area for grazing their flocks (Wirth 1971).

Small-livestock, such as sheep/goat, rearing is the type of pastoralism that is common in the area today beside camel nomadism. Originally the tribes living in the area today are camel nomads who have changed to raise small livestock near the Euphrates river zone. As far as the past archaeological remains of Jebel Bishri are concerned, the evidence gathered so far shows that the area has always been populated by mobile people: hunter-gatherers or pastoral nomads. This is chiefly due to the desert-steppe environment – especially during the Holocene era. The environment that only once in a dozen years reaches 200 mm annual precipitation dictates the subsistence economy

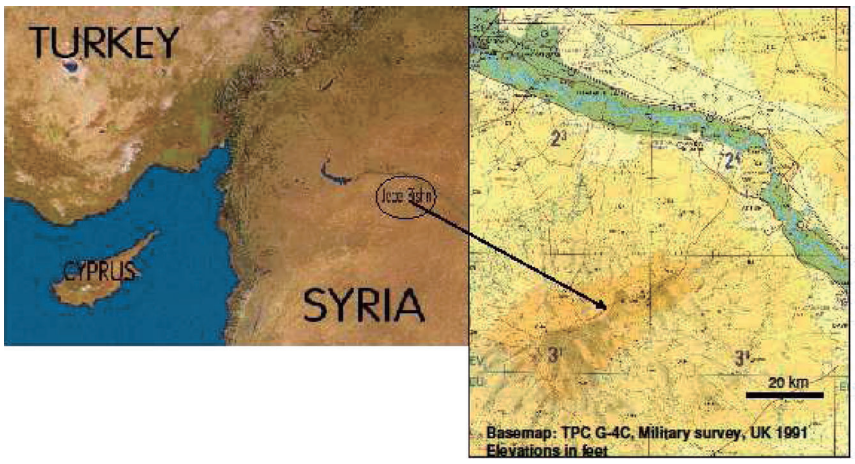

Fig. 1 The location of Jebel Bishri in Central Syria.

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of the local people.

Cairn/tumulus tombs and stone enclosures in the pastoral landscape

Cairns/*tumuli* (Fig. 2) form the most common type of ancient structures encountered on Jebel Bishri. They are constructed of limestone/gypsum cobbles varying from 10 cm to 30 cm in diameter; and the size of the tombs varies from ca. 3 m to 20 m in diameter, being generally 0.5 m to 1 m in height; some may reach 1.50 m in height. Most often these tombs are mixed structures of stones and earth, and this is why we use the designation "cairn/*tumulus"* instead of "cairn" or "*tumulus*". These cairns/*tumuli* are generally located on hillocks or higher ridges, and they divide the space of the desert-steppe and steppe into fixed points like nodes in addition to simple stone heaps, *rujm* markers, both serving the desert travellers as signposts. As far as the surface appearances of the tombs are concerned, some have surrounding stone courses (Fig. 3) in a square pattern or rings composing the so-called ring-*tumuli* (Fig. 4). As some cairns/*tumuli* had been looted, we were able to observe that their inner structures comprised cists (See Lönnqvist *et al.* 2006).

Stone circles of different kinds including pastoral corrals form the second commonest structure type on Jebel Bishri - not being as numerous as cairns/*tumuli* in the region (Lönnqvist *et al.* 2006). The size of the enclosures varies from 3 m to 20 m in diameter. At Nadra in the northeastern central piedmont of Jebel Bishri, an area of 22 km² was covered by surface survey. Altogether 17 sites including cairns/*tumuli* were recorded of the total of 49 sites, and 14 sites included stone enclosures like corrals. Five sites had both of these structures. (Lönnqvist *et al.* 2006). Ash-Shujiri in the central area of the mountain revealed several pastoral sites providing both of these structures as well (Lönnqvist *et al.* 2009a). Also in F. Eddy's and F. Wendorf's survey (1999: 134–135) in Central Sinai *tumuli* and corrals were found together. While cairns/*tumuli* appear as markers of the ritual worlds associated with the ancestors in the landscape, the corrals are equally pronounced structures for living domesticated goats/sheep – both being close to a nomad's existence in deserts

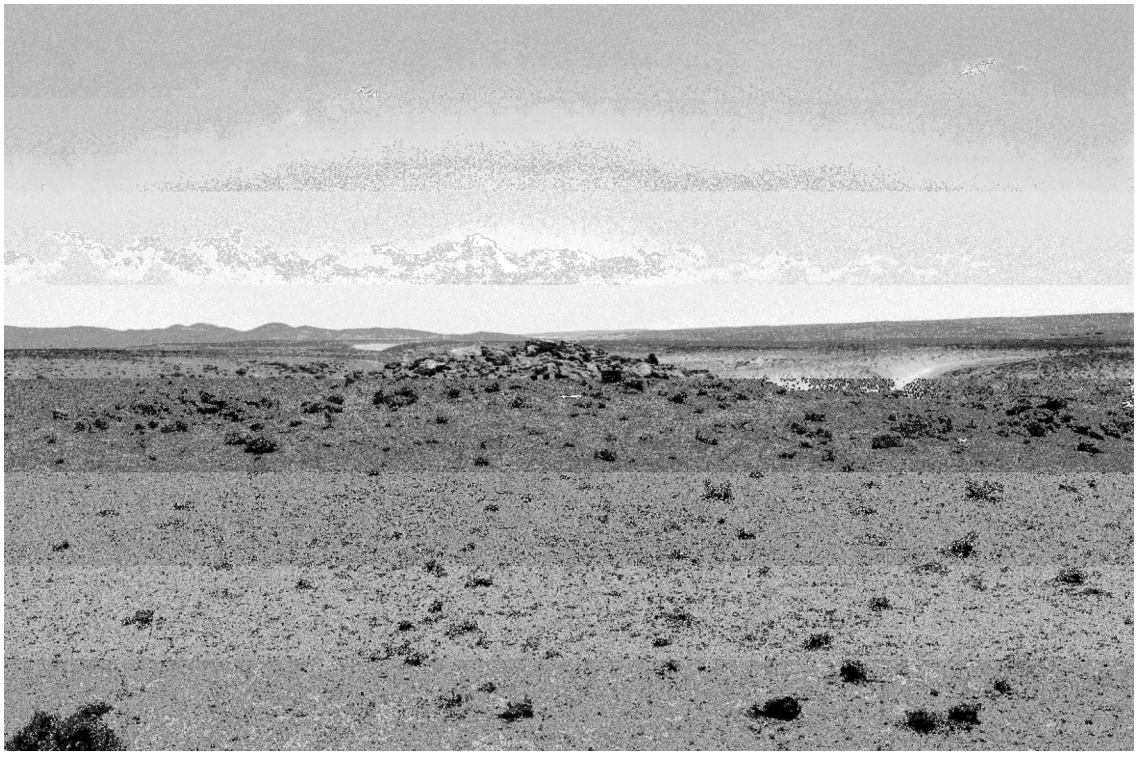

Fig. 2 A cairn on Jebel Bishri. Photo: Kenneth Lönnqvist 2004.

Fig. 3 A cairn surrounded with a wall from Jebel Bishri. Photo: Margot Stout Whiting 2004.

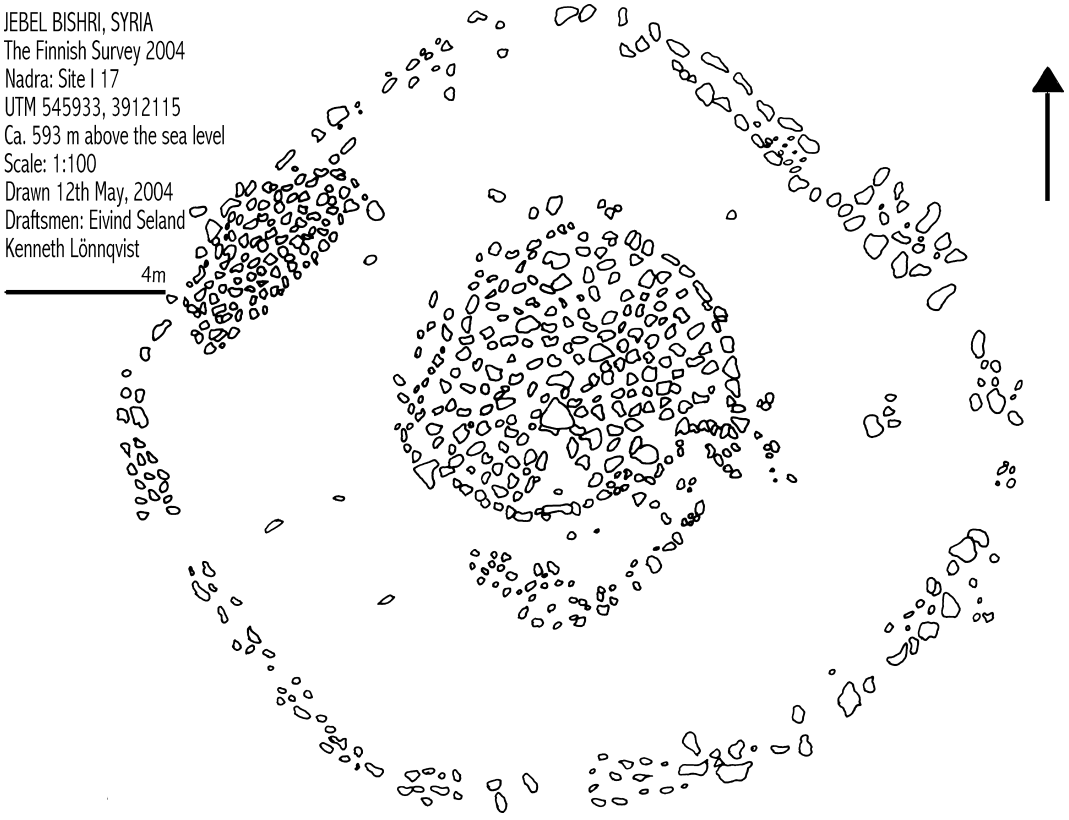

Fig. 4 A plan of a ring-*tumulus* recorded on Jebel Bishri.

and steppes.

Curvilinear forms are preferred in the mentioned types of structures, reflecting the high degree of mobility of the cultures. J. Zarins (1992: 49–51) and others have stated that although the initial phase of pastoral nomadism dates from the Pre-Pottery Neolithic B (PPNB) phase and the Pottery Neolithic period, the actual climax of the pastoral culture in the area of the Greater Southwest Asian Arid Zone took place in the Chalcolithic and Early Bronze Ages. In the period of this climax, cairns and stone circles of different kinds appear as the major components of the nomadic technocomplex. Other structural features which Zarins includes in the technocomplex are kites, cultic platforms and pillars. The earliest datings for cairns/*tumuli* in Near Eastern archaeology connect them with the Chalcolithic Age (ca. 4500–3300 B.C.) (see, e.g., Zarins 1992: 50) becoming more common in the Early Bronze Age (3300–2000 B.C.). The earliest pastoral corrals date from the PPNC/Chalcolithic and Early Bronze Age, but our studies indicate that an earlier and transitional use may have been possible already in the PPNB period.

Indications of tribalism and chiefdom system

Tribalism as a social structure may be inferred from the groups building grave fields with relatively uniform cairns/*tumuli*, which generally seem to date from the Bronze Age on Jebel Bishri. Ring-*tumuli* appear as a special type of tomb structure in some cairn/*tumulus* fields which we have recorded, indicating to the existence of a social organisation pertaining to a chiefdom system.

At Tar al-Sbai, the western edge of Jebel Bishri, altogether 27 sites with cairns/*tumuli* were recorded in the stretch of 2.5 km and 100 m wide area covering altogether 0.25 km². The number of the cairns/*tumuli* was altogether ca. 50 in this short stretch indicating to the existence of a large tribal burial ground, the use of which may cover millennia. Some cairn/*tumulus* compounds or clusters seemed to contain families with parents and children, and in some cases probably a father or a chief had been given a ring around the tomb as to form a ring-*tumulus* signifying status in a family or a tribe. Such burials were met at sites C 8 and C 13. Site A 19 comprised a house associated with the cairns/*tumuli* of C 13 including a ring-*tumulus* as well as megalithic radiating corridors 27 in number. The house itself may date from the Neolithic period according to the flints discovered at the site, but there was also a piece of EB IV pottery (Lönnqvist *et al.* 2006; Lönnqvist 2009).

Among the sites discovered at Nadra three ring-*tumuli* were encountered among the clusters of cairns/*tumuli*, but I 17 is an extraordinary large ring-*tumulus* (reaching nearly 20 m in diameter) due to its commanding position in the landscape with no associated cairns/*tumuli* in the immediate vicinity (Lönnqvist *et al.* 2006). It is suggested here that the special treatment of the tomb indicates that there is a question of a *social persona* (cf. Binford 1972) – and this clearly indicates to a chiefdom type of society differing from the purely egalitarian tribal society. The tomb is situated on the top of a hill overlooking a large seasonal *wadi* next to the settlement I 16. Associated flint objects were found around the grave (Lönnqvist *et al.* 2006). A likely dating for the tomb is the Chalcolithic and Bronze Age, with connected finds from the settlement site I 16 and parallel types of tomb structures in other sites. A comparable large ring-*tumulus* has also been studied at Rogem Hiri on the Golan Heights, and the earliest finds in the neighbourhood date from the Chalcolithic Age (see Kochavi 1991: 182–183; Mizrahi and Zohar 1993: 1286–1287). The nearby settlement I 16 was *inter alia* in use during the Chalcolithic and Bronze Age (both EBA and MBA) according to the pottery finds (Lönnqvist 2009), thus the megalithic ring-*tumulus* dates either to the Chalcolithic or to the Bronze Age.

Ancestor cults and various rituals

The life of ephemeral camping apparently created a need for mobile people to have permanent resting places for their ancestors. Ancestors have a central meaning in patriarchal lineages and tribalism, and the ancestor cult is one of the earliest cults in humanity's past (Durkheim 1912). Because of their position in the heights and good visibility, hilltops and mountain edges served as preferred sites for cairns/*tumuli* in the nomadic landscape of Jebel Bishri. At least from the time of the cairn/*tumulus* burials, sacred meanings can also be associated with the choice of higher grounds. The choice of higher locations for cairn burials is typical in many parts of the world.

Site A 27 at Tar al-Sbai consisted of large stone enclosures ca. 20 m in diameter inserted with cairns/*tumuli.* The site A 27 and A 19 (including C 13) were situated on spurs so that they offered impressive views from the heights to different directions towards the desert plateau beneath. The location of the sites was ca. 800 m a.s.l. Site A 27 also incorporated a 40 m long line of petal-like or hearth-like structures at the edge. A comparable line is incorporated into the compound of curvilinear structures on a *wadi* edge at Site S-7 in Wadi Rahaya and at Site S-12 adjacent to a stone-lined ring and a *tumulus* on a terrace at Gebel Safra in Central Sinai (See Eddy and Wendorf *et al*. 1999: 27–30, 33, 35). Interestingly, the stones classified among megalithic rings and rows incorporating cairns in other parts of the world also exhibit comparable structural features (cf. passim Thom and Thom 1990) to those met at site A 19 (including Site C 13) and A 27 of Tar al-Sbai. They have apparently served rituals associated with ancestral cults.

S. Bourke has published studies on the cairn-*tumulus*–cist-enclosure-ruinfields at Adeimeh two kilometres from Teleilat Ghassul and the ruinfield from a kilometre south of Bâb edh-Dhra' in Jordan. At Adeimeh immediately south of the cist – *tumulus* ruinfield there is a 30 m wide rubble-mixed stone enclosure. Similarly associated with the cairn and rubble *tumuli* at the Bâb edh-Dhra' ruinfield there appeared two 25 m wide enclosures. From the associated small finds and parallel structures Bourke infers that both the Adeimeh site located two kilometres southeast of Ghassul and the Bâb edh-Dhra' ruinfields are elaborate burial complexes from the Chalcolithic Age, apparently associated with the Ghassulian culture (the type site being Teleilat Ghassul in Jordan dating from the fifth and fourth millennia B.C.). For example, an enclosure similar to those at Adeimeh and Bâb edh-Dhra' has been identified at Nahal Mishmar, the site of the famous Ghassulian copper treasure near the Dead Sea (See Bourke 2002: 14–17 and Bourke 2008: 109–160).

The location and the views from the sites A 27 and A19 (including C 13) at Tar al-Sbai immediately recall Chalcolithic ritual or cultic centres in the Levant, such as the Ghassulian temple at Ein Gedi (see, e.g., Ussishkin 1980: 1–44) in the Judean mountains, offering a view from the heights over the Dead Sea plateau. In the Near East, and especially in Syria, high places have been often associated with sky gods. Mountain-tops were thought to enhance observation of stars and planets and other cosmic forces (Godwin 1981: 151). Traditionally, sacrificial sites have been distinguished by their striking appearance or location in the landscape (Bradley 2000: 6–8). A. Thom and A.S. Thom could not study comparable structures without becoming convinced that many of such circles also had astronomical significance (Thom and Thom 1990: 91–93, 188–189). Astronomical observations have also been associated with the megalithic ring-*tumulus* of Rogem Hiri on the Golan Heights (see, e.g., Albani and Glessmer 1997: 94).

It is possible that the grave fields and megalithic structures at Tar al-Sbai incorporate ritual and cultic elements both from the Chalcolithic and Bronze Age – and the area has been still used as a burial ground by the local Bedouins of the Fed'ān tribe, who mark their tribal territorial borders with tombs.

Differences in graveyard types as tribal variation?

Nomadic compounds form material manifestations of small-scale tribal groups which may belong to larger tribal confederations. Sites along the Euphrates river clearly point to the Early Bronze Age and Middle Bronze Age influence; the Early Bronze Age remains are especially prominent. Some of the evidence can apparently be connected with the so-called Amorite impact in the area. But, in the absence of any epigraphic data *in situ,* this suggestion of ethno-tribal influence in specific is hypothetical, as the evidence is only tentatively reflected in the archaeological material. However, the types of cairns/*tumuli*, cists and shaft tombs on the Euphrates side of Jebel Bishri including those from the graveyard of Abu Hamed (Falb *et al.* 2005), are typical of the EBIV sites associated with the areas bearing evidence of West Semitic tribal societies in Syria (cf. Lönnqvist 2000). The cuneiform texts indicate the Amorite - MAR.TU presence in the area already in the Early Bronze Age (e.g., RIME 2 S. 183). The Middle Euphrates region and Jebel Bishri consisted of several West Semitic tribes, as has been lucidly presented, e.g., by J.-R. Kupper (1957).

The differences in the contemporaneous Bronze Age tomb types on the Euphrates side of Jebel Bishri may imply tribal differences or affiliations to certain tribal confederations. We can tentatively suggest that the late Early Bronze Age shaft graves appearing along the Middle Euphrates from Abu Hamed (Falb *et al.* 2005), Tell Hadidi, Tawi, Halawa (see the references to the sites in Lönnqvist 2000), Tell Banat (Porter 1995) and Tell Sweyhat (Zettler 1996, see especially pp. 18–19 and 20–21) could signify a tribal confederation. It may be recalled that in the later Mari sources of the Amorite tribes of the Middle Bronze Age the territory belonged to the Benjaminite tribal area extending from Mari up to Harran (Kupper 1957: 47–81).

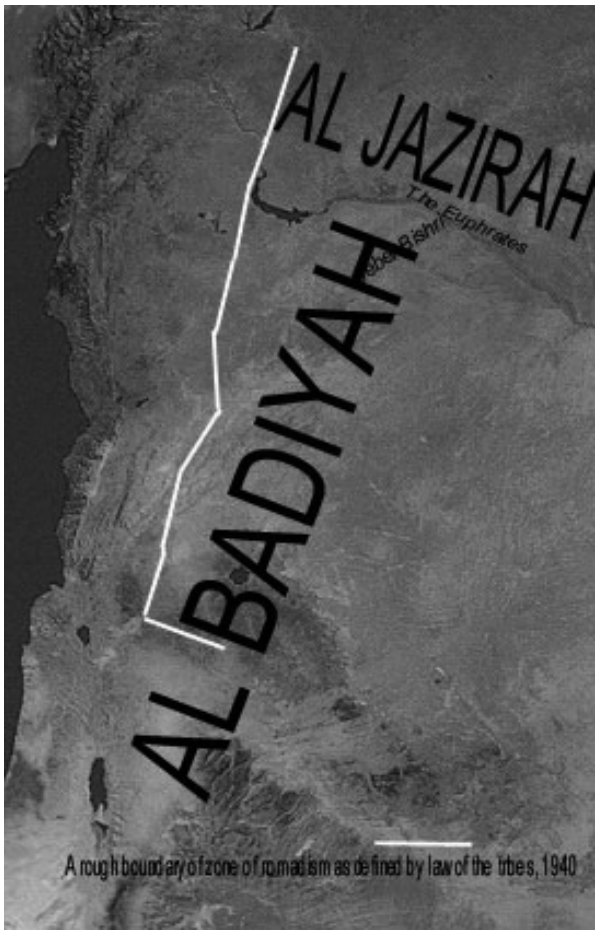

Fig. 5 A rough boundary of zone of nomadism as defined by Law of the tribes, 1940.

However, cairn/*tumulus* tomb types, including cists, so typical of the mountain proper of Jebel Bishri could express affiliation to another tribal group or confederation that was more connected with the desert areas, and in the Mari texts the area belonged especially to the Suteans. Suteans mainly lived between the Middle Euphrates bend and the oasis of Palmyra (Tadmor) (Kupper 1957: 98). This is the area within which Jebel Bishri is totally enclosed. Suteans also were apparently more nomadic than the Benjaminites. However, when we look at the distribution of such tomb types as the shaft tombs *vis-à-vis* the cairns/*tumuli* the latter group appearing together with corrals is clearly allocated outside the arable land, and it is more connected to desert-steppe areas of mobile cultures. Whereas the shaft-graves usually appear associated with EBIV settled sites and seem to be more connected to the agricultural areas – and thus probably to more agro-pastoral economy (Figs. 5 and 6).

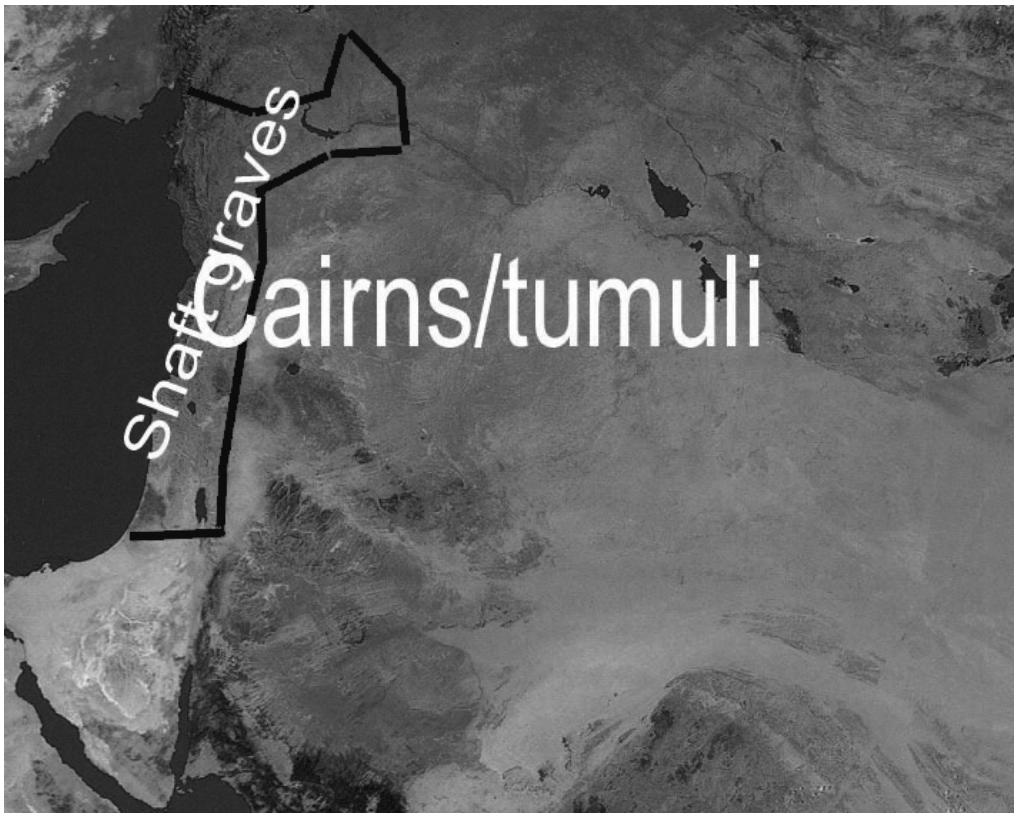

Fig. 6 A rough spatial distribution of the Bronze Age shaft graves and cairns/*tumuli* in the Levant.

Concluding remarks

- Tribal implications may be discerned among the cairn/*tumulus* tombs in the pastoral landscape of Jebel Bishri.
- Cairn/*tumuli* and pastoral enclosures called corrals form the world of dead ancestors, important to tribal patriarchal affiliation and living animals close to the nomadic people: they are the fixtures of the mobile pastoral people visible in the archaeological record on Jebel Bishri.
- Both are spatially allocated outside arable lands as the most common archaeological structures on Jebel Bishri.
- Cairn/*tumuli* are located on hillocks and ridges on higher grounds, visible to desert travellers and possibly serving as territorial markers for tribal people.
- Existence of ring-*tumuli* among the cairns/*tumuli* field indicate that the chiefdom level was attained in tribalism of the region during the Chalcolithic and Early Bronze Age, continuing to the present day.
- Megalithic complexes with cairn/*tumuli* appear as specific ritual structures, which may be associated with ancestor cults, rituals on mountain tops and astronomical use.
- Variation of tomb types, such as cairns/*tumuli*, cists and shaft-graves in the region of Jebel Bishri may denote tribal differences or differences in tribal confederations comparable to the Benjaminite and Sutean tribes reflected in the Mari texts.

Acknowledgement
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PART III

HISTORY OF TRIBAL COMMUNITIES IN SYRIA: CITIZENS AND NOMADS VIEWED FROM ARCHAEOLOGICAL SITES

URBAN ELEMENTS IN EARLY BRONZE AGE SETTLEMENTS OF THE NORTHERN EUPHRATES VALLEY OF SYRIA[1]

Lisa COOPER*

It is clear from the extensive excavation work that has been carried out in the Northern Euphrates River Valley of Syria that settlements with urban characteristics grew and flourished during the Early Bronze Age. In this paper I will highlight what these urban features are, and then contrast them to those observed elsewhere in Greater Mesopotamia from the same time period. After considering this evidence, I argue that Euphrates settlements followed a somewhat different organizational trajectory than those in other areas such as the Khabur Plains to the east or western Syria. I shall attempt to account for these differences by considering the cultural and environment context of settlement and society within the Syrian Northern Euphrates Valley. Further, I will argue there is no over-arching model of cultural organization that can be applied to all of the settlements of this region, but rather, we must accept the existence of a variety of different co-existing systems, each representing a different aspect of a diverse population that had a host of varying economic interests, religious traditions and social interactions.

The period of focus is the Early Bronze Age, specifically between 2600 to 2100 BCE, during which time one sees an increase in the number of inhabited sites in the Euphrates Valley, as well as an increase in the size of many of these sites (Fig. 1). The beginning of this period coincides with the time of urban and state growth that took place to the east, in the region of the Habur Plains, and manifested at sites such as Tell Brak, Tell Leilan, Tell Mozan and Hamoukar (Akkermans and Schwartz 2003: 261; Ur 2002). To the west, the process of state formation and accompanying urban growth of some sites, notably Ebla, appears a century or two later, but it was equally substantial. In the Euphrates Valley itself, one too sees a period of urban growth, with several of its settlements taking on distinctively urban-like features.

Perhaps the most conspicuous features of the Euphrates urban settlements are their fortifications, which are often monumental in scale, comprising defensive walls, ramparts, towers and fortified city-gates. The origins of these defenses go back to the beginning of the EB, as observed at the site of Halawa Tell B, where a thick buttressed mud brick wall, reinforced several times over, enclosed the early habitations (Orthmann 1989: 87–88). In the earliest phases at Tell Habuba Kabira, mud brick buildings were built side by side, their back walls forming a solid defensive line along the eastern side of the site facing the Euphrates River (Heusch 1980: 161). With each subsequent phase at Tell Habuba Kabira, the system of defenses became increasingly elaborate and strong (Fig. 2). By the middle of the Early Bronze Age, substantial city walls had become a characteristic feature of a number of sites, including Jerablus Tahtani, Tell Banat, Tell al-'Abd, and Munbaqa. The most imposing defensive systems appear in the late Early Bronze Age (2300–2100 BCE), attested at sites such as Tell es-Sweyhat, Tell Qannas, Halawa Tell A, Tell Habuba Kabira and Selenkahiye (Cooper 2006:73). At Halawa Tell A, the city wall was strengthened with regularly-spaced buttresses and corner towers. One can also note at Halawa the construction of a sloping rampart of earth and packed clay over the natural slope of the hill, built against the exterior side of the city wall (Orthmann 1989: 15, 17). A mudbrick casemate wall was constructed at Munbaqa, this feature dating to the mid-to-late

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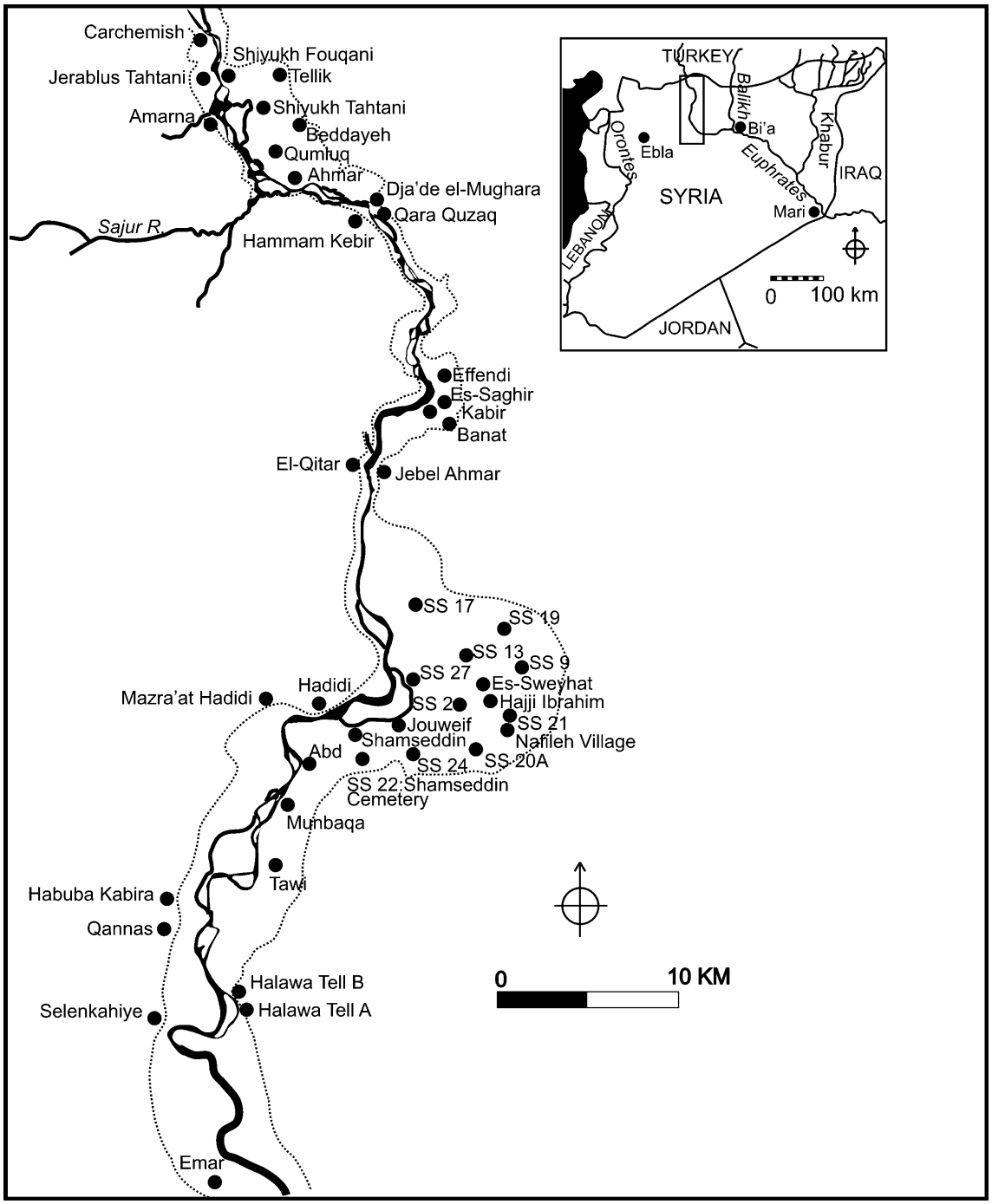

Fig. 1 Northern Euphrates River Valley of Syria, showing the location of EB settlements (the dotted lines indicate the edges of the river valley).

third millennium BC (Eichler et al. 1984: 73; Machule et al. 1986: 81–83). At Selenkahiye, the city is enclosed by a city wall and furnished with towers, a fortified gateway, and fronted by sloping glacis (Van Loon 2001: 3.86, 3.89). As a last example of fortifications, we may turn to the recent excavations at Jebel Bazi, where the remains of a defensive system on top of the 60-metre high citadel hill have been identified. Here the excavators found a series of stone walls and a monumental gate building, the central element of which was a chamber gate (Otto 2006: 11).

As further testimony to urban life, several of the Euphrates EB settlements comprised densely

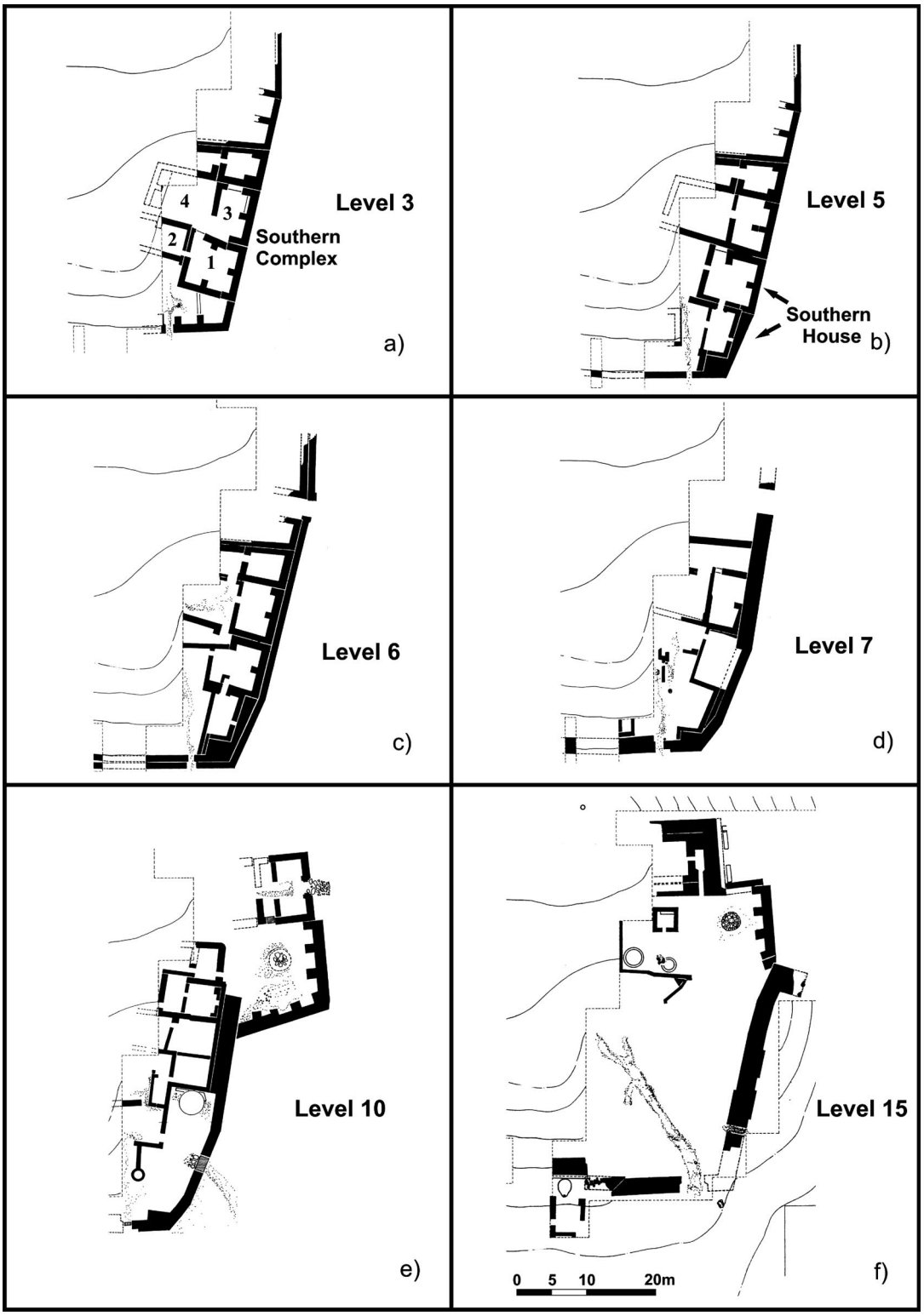

Fig. 2 Houses at Tell Habuba Kabira through phases of the EB.

spaced blocks of domestic houses and associated streets. The neighbourhoods of Halawa Tell A, from the mid-to-late third millennium BCE, are well preserved both to the north and south of a temple *in antis* complex (Fig. 3) (Orthmann 1989: Beilage 8–10). The houses were arranged side by side in blocks, and aligned on either side of streets that ran the length and breadth of the settlement.

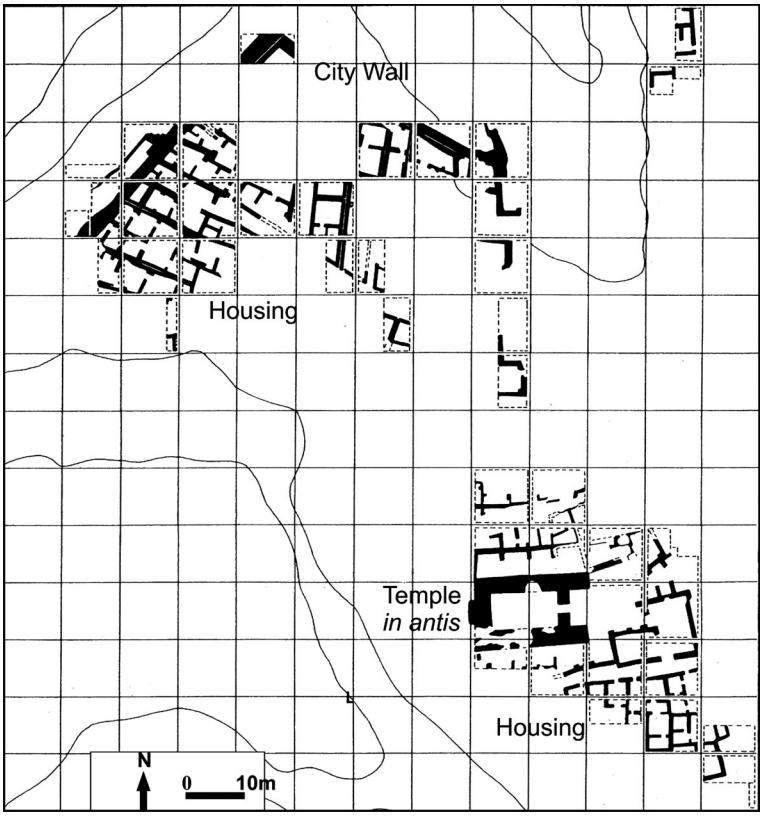

Fig. 3 EB settlement at Halawa Tell A, with housing, city wall and temple *in antis*.

While over time the internal layout of the houses changed due to various modifications, they seem originally to have been laid out with similar interior room arrangements and uniform sizes and proportions within each of the city blocks (Pfälzner 2001: 349–50). One can assume that this phenomenon is indicative of some form of urban planning, entailing a coordinated effort on the part of the town's inhabitants for its planning, funding and construction (Cooper 2006: 106).

Urban planning is also evident at the site of Tell Hadidi, where excavations in an area in the lower town revealed blocks of late EB houses arranged for more than 48 metres along one side of a street (Dornemann 1979: 117). The presence of such a long thoroughfare through the settlement could only have been the result of careful town planning in conjunction with the laying out of well-aligned city blocks.

Evidence for housing is extensive at Selenkahiye. In Excavation Area B, houses were found arranged on either side of two long streets. Unlike the arrangement at nearby Halawa A, however, the houses at Selenkahiye seem to have been planned and laid out rather loosely within the settlement, and they exhibit considerable variety in terms of their size, shape, room number and interior room arrangements (Van Loon 2001: 3.50–3.83; Cooper 2006: 107–113). Even so, the houses clearly represent a densely built-up area of urban occupation, and the artifactual remains found within them reflect a full range of domestic activities, small-scale craft industries and commercial exchanges, altogether comprising typical households within a thriving, urban context (Van Loon 2001: 3.64, 3.74–3.78, 3.99–101).

Craft production, particularly the production of metalwork, textiles and pottery, is generally well-attested and some of the evidence suggests that craft activities could attain a high level of specialization. Metal was prolifically available, as reflected by the wealth of metal weapons and pins recovered from EB tombs at Tell Ahmar, Jerablus Tahtani, Tell Banat, Tell es-Sweyhat, Halawa

Tell A, Selenkahiye and the neighbouring cemetery at Wreide, most dating from the middle to later part of the Early Bronze Age (Cooper 2006: 221–22). Evidence for metalworking, found in the form of stone moulds for axes and daggers, crucibles, tongs, terra-cotta bellows, copper tools and raw copper ingots, have been retrieved from mid-to-late 3rd millennium contexts at Tell Ahmar (in the form of univalve moulds), Tell Qara Quzaq (a stone mould and crucible), Jerablus Tahtani (crucibles and dagger mould), Tell es-Sweyhat (crucible, bronze tongs), Tell Hababa Kabira (raw copper ingots, tubular part of a terra-cotta bellows, copper tools and a limestone mould for various types of axes), and Tell Qannas (stone mould). Most of this evidence has been found in contexts associated with elite households and elite activities (Cooper 2006: 171–75).

Evidence testifying to textile production, namely spinning, weaving and the dyeing of cloth, takes the form of vats and pigments at Tell Habuba Kabira, bobbins at Jerablus Tahtani, spindle whorls from Tell es-Sweyhat and Tell Banat, and the possible remnants of looms from Tell Banat (Heusch 1980: 168; Strommenger 1980: 71; Peltenburg et al. 1997: 7; Zettler 1997b: 39, 42; Porter and McClellan 1999: 16, 20; Porter 2002b: 158). Last, pottery production has been attested. Two-chambered up-draught kilns have been uncovered at Tell Habuba Kabira outside of the city wall (Strommenger 1980: Abb. 74–75; Heusch 1980: 172), Halawa Tell A (Orthmann 1981: 61), and Tell es-Sweyhat (Zettler 1997: 47). Tell Banat offers rich evidence for the production of pottery in the form of several kilns concentrated in one sector of the site, along with a multi-roomed production building, ash dumps of slag, vitrified pottery and vessel discards (Porter and McClellan 1998: 14–23; 31). The vessel-types represented in these kiln refuse deposits show uniformity in terms of their overall size, fabric, body shape, rim and base features. It was additionally observed that the paste and temper of the vessels is fundamentally the same throughout, with the exception of differences in the colour of the fired vessels, which would mainly be attributable to fluctuations in kiln temperatures during the firing process (Porter and McClellan 1998: 21–23). It seems likely that these pots were the product of specialists, sufficiently accomplished in their craft to produce uniformly similar products many times over.

As a last urban feature, one may note evidence for long-distance trade and exchange. Exotic, valuable objects are particularly prolific in several of the Euphrates graves. Tomb 302 at Jerablus Tahtani, contained objects of gold, silver and rock crystal, ostrich eggshells and ivory plaques (Peltenburg 1999: 102). Tomb 7 at Tell Banat had an equally rich repertoire, characterized by objects of lapis lazuli, an inlaid ostrich egg, a gold pendant, and over a thousand gold beads of a variety of shapes that were found strewn over the body of the deceased, showing excellent parallels to beads from Anatolian sites such as Poliochni and Troy (McClellan and Porter 1999: 110). These items were obtained through long-distance trade, or else they reflect gift exchanges and tribute taking place between various elite groups and leaders within individual communities. Peltenburg observes that this type of networking "entailed acculturation to an exclusive courtly society, and this in turn introduced new behavior that visibly set leaders apart and legitimated their position" (Peltenburg 2008: 235).

It seems clear from the evidence that several Euphrates settlements went through a period of urban development during the Early Bronze Age. But it is incorrect to say that these Euphrates sites ever attained the same level of urban complexity as has been observed in other parts of Greater Mesopotamia during this period. Moreover, when we look more carefully at the urban elements that we have just described, they do not always compare well in function and significance to those found in other Upper Mesopotamian urban communities. For the remainder of my paper I will highlight these Euphrates differences: I will describe features that the majority of Euphrates sites clearly do not posses and possible reasons for their absence. I will also discuss the background context of some of the Euphrates urban elements and suggest reasons for their distinctive forms and functions.

Turning now to other cities in Northern Mesopotamia and Syria, we may note some striking

site components which are virtually unattested within the Northern Euphrates Valley. The site of Tell Leilan, for example, highlights the tremendous strides in urbanism and state formation which northern Mesopotamian settlements could experience. Around 2600 BCE, we see a remarkable transformation from a 15-hectare town to a massive 90 hectare urban complex surrounded by a high fortification outer wall (Risvet 2007: 185). Even more impressively, the site possessed a central high place — the Acropolis – which dominated the surrounding 65 hectare Lower Town, and which contained the remnants of an elite public complex, characterized by several grain storerooms covering an area of about 300 square metres, a cultic platform and industrial installations. An abundance of cylinder seal impressions within the storerooms attest to the administrative nature of this area. It seems clear that by 2600 BCE, there had emerged a ruling stratum at Tell Leilan which appears to have controlled ritual activities at the site, as well as presided over vast quantities of surplus grain at the centre of what was probably a complex distributive economy.

Further indications of the growing urbanism of Tell Leilan and its centralizing trendencies can be recognized in the surrounding countryside. When that site grew to 90 ha, the regional settlement systems shows signs of a major reorganization, producing a four-tier hierarchical pattern, comprising secondary centres, towns and villages from which the urban centre of Leilan would have systematically extracted large-scale agricultural surpluses (Stein and Blackman 1993: 32; Stein and Wattenmaker 2003: 366). Other similar Early Bronze Age settlement hierarchies have been detected elsewhere in the Jezireh of Upper Mesoptamia (Wilkinson and Tucker 1995: 81).

Travelling now to Ebla in western Syria, we have an equally clear picture of centralization and state development occurring within an urban complex of the third millennium BCE. By 2400 BCE, this site was characterized by a central high mound, and dominated by a vast, rambling palace, the dwelling place of the king and his extensive royal household of high officials, servants and scribes. Physically, the elevation and monumentality of this palace sets it well apart from the other buildings at the settlement. Within the structure palatial authority is marked by the presence of a large open "Court of Audience" with a raised throne dias, and by the presence of rooms where thousands of cuneiform tablets have been found attesting to the wealth and centralized authority of the local royal establishment. Thousands of palace officials artisans and labourers were paid in food rations supplied by the palace. Moreover, we learn that the king owned thousands of sheep and that the palace oversaw the mass-production and distribution of woolen textiles, one of it its principal industries (Akkermans and Schwartz 2003: 239). The royal household's long-distance contacts with other lands are well attested by stone vessels from Egypt, for example, and chunks of un-worked lapis lazuli from far-off Afghanistan. Like elites elsewhere in Mesopotamia, the king and his royal entourage participated in banquets or feasts to celebrate and perpetuate their elite status. This finds reflection at Ebla in the hundreds of distinctive drinking cups found throughout the place (Mazzoni 2003: 185). The palatial establishment at Ebla was clearly a force to be reckoned with and it wielded economic and political power over a vast hinterland.

In contrast to sites such as Tell Leilan and Ebla, no comparable levels of centralized authority are attested among the Northern Euphrates settlements. Large-scale secular structures, probably the residences of elite individuals, are sometimes attested, but they rarely take a central elevated position within the settlements. The elite structure on the central mound at Tell es-Sweyhat is perhaps the one exception to this rule, and to this we will return later. The large size and opulent furnishings of Buildings 6 and 7 at Tell Banat are the most likely candidates for palace-style structures, but they were not located in an exceptionally visible or elevated place at the site (Porter 2002b: 167). Their close proximity to tombs as well as their position directly over an earlier mortuary tumulus suggests the buildings' association with funerary traditions at the site (McClellan 1999: 418–19; Porter 2002a: 16). Their owners may have sponsored many of the site's funerary rites, and played important roles in their cults, but there is little physical evidence to suggest that they represented a centralized

authority that wielded power over *all* aspects of Tell Banat society.

Besides the near-absence of centrally located, elevated elite complexes, the lack of political or economic centralization is also reflected in the settlement patterns of the surrounding countryside. In the Euphrates region of Syria, it is difficult to confirm any type of three or four-tier hierarchies, as has been postulated for the Jezireh to the east, where smaller towns and villages essentially became the tributaries of the larger cities during the mid-third millennium (Cooper 2006: 58). Settlement hierarchies are completely unattested in the southern part of the region below Tell Hadidi, where the river valley is relatively narrow. To the north, wider river embayments appear to have afforded a greater concentration of Early Bronze age settlements of varying sizes. When we examine the characteristics of these sites, however, it is difficult to discern, beyond their different sizes, which settlements were "centres" and which served as subsidiaries or "tributaries." Socio-economic complexity is evident at many of these sites, regardless of their size and location. To give one example, in the embayment south of Carchemish at least five EB sites are attested. At 2 ha, Tell Ahmar is one of the smallest sites, but it has yielded a late EB tomb of monumental proportions and highly valued tomb objects, suggesting a high degree of wealth and access to resources on the part of the individuals who were interred within the tomb. What is such socio-economic inequality doing in a small site like this? In light of evidence such as this, it may be fallacious to reconstruct a truly ranked settlement hierarchy in the Euphrates Valley. Rather, we might view settlement within these systems as possessing complementary or specialized functions, possibly serving the large communities in some respect but at the same time maintaining high degrees of autonomy and authority (Cooper 2006: 61). The fact that the region is characterized by several different avenues for appropriating wealth: commercial opportunities afforded by trade along the Euphrates River; the agricultural productivity of the river valley, and the pastoral and additional dry-farming possibilities of the steppe land beyond, might go far to explain this unusual configuration of settlements and their unique characteristics.

Even among settlements where urban features have been detected, it is clear they never achieved the scale, complexity and magnitude of cities elsewhere in Northern Mesopotamia and Syria. Euphrates' city walls, while sometimes extensive, for example, rarely appear to have been centrally planned and constructed in a single undertaking. On the contrary, these site's defenses appear to have been the result of several centuries of building and refurbishment, leading only gradually to the imposing edifices exhibited in the latest EB phases. Moreover, investigations have usually failed to detect any consistency as to the layout and construction of defensive features from sector to sector within a settlement. For example, Tell es-Sweyhat's outer fortifications varied from one city sector to another: they ranged from an earth rampart (in the eastern lower town), to a possible casemate system (in the northwestern side of the outer town), to a possible double line of walls (in the northwest and northern stretch of the outer town) (Zettler et al. 1996: 33; Zettler 1997: 49; figs. 3.13–14). Similarly, the city wall at Selenkahiye does not appear to have been consistently built. There are changes in the direction of the wall, changes in wall dimensions, no regular placement of buttresses and towers and variation in the number and scale of reconstructions and enlargements (Van Loon 2001: 3.103). It is suggested that the actual construction and refurbishment of Selenkahiye's wall was left to individual quarters, or blocks of the settlement, rather than under the supervision and construction of a single central authority.

One can easily contrast this decentralized picture to that of an urban settlement such as Tell Chuera to the east, where the defensive walls, and indeed the entire interior layout of the city, appear to have been the work of a single organization or institution. Similarly at Tell Leilan, the construction of its massive city wall coincided with the planned neighbourhoods and streets of the lower town and the grand public complex on the Leilan Acropolis (Risvet 2007: 204). This work is most probably that of a centralized elite authority with the manpower and resources to undertake this massive

expansion which effectively transformed the town into a city that had a new dominant role in the Eastern Habur Plains (Risvet 2007: 205). The same can be said for walled, planned cities elsewhere to the east, such as at Tell Mozan, Hamoukar, Tell Khoshi and Tell Taya around the same time (Risvet 2007: 185; and n. 9).

One further comment can be made about the fortifications at Tell Leilan and other Jezireh sites: their function went beyond that of simply providing protection for the inhabitants against hostile attacks and raids. The monumentality of these defensive works played a forceful symbolic role, demarcating the cities from their hinterlands of villages and fields, and serving to highlight over a wide distance their preeminence, and the place from which their authority and wealth emanated. We doubt that such defensive systems in the Euphrates River Valley ever attained the same scale of symbolic import. They certainly did not ostentatiously highlight the hegemony of any one settlement over another. We must conclude that the Euphrates fortifications' purpose was truly defensive: they provided protection for the inhabitants and their possessions, and they testify to the ever-present threat of hostilities that characterized the region throughout much of the Early Bronze Age. These hostilities may have come from intruders from the surrounding steppe land, they may have been the result of competitive neighbouring polities, or they may represent the territorial aspirations of rulers from other Mesopotamian states (Cooper 2006: 69). That Euphrates settlements were sometimes the victims of attacks, possibly from these outside forces, seems particularly well illustrated at the Citadel of Bazi, where its monumental gate building (Building 2) was thoroughly destroyed by a military event and covered with thousands of sling bullets and numerous flint arrowheads (Otto 2006:11).

Turning back now to Euphrates craft production, much of the evidence has been found in domestic contexts as opposed to separate specialized workshops. In the case of the kilns which were found outside of the city walls, the lack of other associated craft facilities does not suggest that they were part of large-scale production centres. An exception are the proliferation of kilns and workshops at Tell Banat, but this site's pottery industry appears to be connected to the site's unique mortuary function, and need not be tied to the presence of an elite centralized authority with control over its production (Cooper 2006: 198).

When we turn to other cities elsewhere in Northern Mesopotamia and Syria, we see a greater intensity of craft specialization, and even evidence that some of this production was sponsored and supported by the state. Inscribed tablets from the Ebla Archives provide useful information about the organization of production. Careful records were kept, for example, of the raw materials collected by the palace and then stored in their storehouses. In the case of metals, the tablets record that the tribute from one city alone amounted to 15,000 ingots of bronze, 100 gold bars and 840 silver bars. Metalsmiths, who were organized into "labour squads" and supervised by overseers from the royal palace, were employed to work these raw materials into a range of goods (Archi 1982: 211–13; Stein and Blackman 1993: 51–53). The Ebla palace's involvement with textile production on a grand scale is indicated by tablets which describe the palace-owned "wool house," which employed hundreds of labourers, and whose inventories list thousands of manufactured garments of varying qualities (Archi 1982: 211; Stein and Blackman 1993: 52). This type of craft organization is surely more complex than anything taking place in the Northern Euphrates, and it emphasizes the wealth and preeminence of the state institutions which controlled these industries.

Monumental architectural features are well attested in the Syrian Euphrates Valley, but rather than being massive, centrally located, elevated public platforms, as observed at Tell Leilan and Tell Mozan, or grand palaces set at the apex of the settlements, as at Ebla, they take the form of mortuary monuments and large, splendidly appointed tombs. It is clear from these monuments that Euphrates society, and the elites who directed this society and constructed their own symbols of authority, were focused on quite different traditions, many of which emphasized the power and continuing force

of the ancestors. Such a focus is almost certainly due to the prominence of kin-based tribal groups, whose populations dominated parts of the Euphrates Valley and surrounding hinterlands (Peltenburg 2008: 240).

Included among these monumental mortuary structures is the imposing White Monument (Mortuary Monument 1), one of several monumental tumuli located at Tell Banat. Standing over 20 metres in height, its exterior face was covered with a thick coating of white plaster, and corrugated in horizontal bands (McClellan 1998: 244–45). Several discrete deposites of human and animal skeletal parts, and pottery were cut into the sloping sides of the monument, this being interpreted as the final stage of a multi-stage burial practice, in which parts of bodies, previously interred elsewhere, have been taken for re-burial on the White Monument (Porter 2002b: 160–61; Peltenburg 2008; 223–24). This act has been interpreted as highlighting the corporate nature of the community, whereby individual identity is de-emphasized in favour of a collective dead, and it indicates a society based on kin and community, rather than an emphasis on a stratified society (Porter 2002b: 170; Peltenburg 2008: 224).

Although north of the Syrian border, the Turkish site of Gre Virike should not be ignored due to its similarity to the Mortuary Mounds of Tell Banat. Gre Virike's outstanding feature is a large raised platform that supported a mausoleum complex and open paved summit, where associated rituals could take place. This platform has been interpreted as a cult place for the public display of the community's ancestors. As has been pointed out, the notable lack of wealth disparities among the dead suggests a funerary complex organized by a collective group (Okse 2005; Peltenburg 2008: 223).

At the same time as such potent symbols of unity and social parity were being perpetuated, there was an opposing tendency within Euphrates society towards the establishment of social-economic hierarchies, characterized by wealthy and powerful elites. But these elites' attachment to the tribal-based ancestor-centred ideologies is suggested by their continued sponsorship of the White Monument at Tell Banat and the corporate ideology it showcases, at the same time as they were constructing their own funerary monuments in the form of finely built and richly appointed stone or brick tombs. Such tombs have been recognized at Tell Banat, Jerablus Tahtani, Tell Ahmar and Tell Bi'a. Even though these tombs are in reality overt symbols of the exclusionary strategies of an elite group, the fact that they are being cast in the form of a funerary monument represents a continuing attempt on the part of their owners to link themselves to the past and the tribal ancestor traditions that defined that past.

The prevalence of pastoral tribes with their emphasis on kin-based descent groups and reference to ancestors, explains many of the unique characteristics of the Syrian Northern Euphrates Valley, setting it apart from other regions of Mesopotamia and Syria. The notion that a pastoralist-based society prevailed in the Euphrates Valley was first introduced by Anne Porter to account for the unique funerary character of Tell Banat, and it has been further elaborated by Edgar Peltenburg, in his research of Euphrates funerary practices (Porter 2002b; Peltenburg 2008). As is argued, pastoral groups are usually typified by inclusive or corporate ideals, where power is shared across different groups and sectors of a society (Blanton et al. 1996; Porter 2002b: 167–68; Peltenburg 2008: 219). One can argue that the large, accessible mortuary monuments are particularly clear manifestations of such corporate strategies. Such monuments countered the centrifugal tendencies of these tribal societies, since they provided a central focus of pastoral groups when they brought their flocks to the well-watered river valley during their seasonal cycle of grazing (Peltenburg 2008: 221). And even though the prominence of monumental elite tombs signifies an opposing trend towards more exclusionary strategies, these tombs' presence still marks the existence of the same kin-related groups; they are also places where the veneration of the tribal ancestors could occur, albeit access to those ancestors was now largely controlled and possibly limited by the ascendant elites who constructed and maintained these structures (Peltenburg 2008: 232).

But is this pastoralist model sufficient to explain *all* of the unique characteristics of settlement that we may observe in this Euphrates region? Did all Euphrates settlements have significant connections or relationships with mobile pastoralists, and did this pastoralist model permeate all of their social and religious institutions? I would argue that this was not the case, and that with a closer inspection of evidence from the entire assemblage of sites, we see a much wider array of organizational forms than what was originally assumed to exist.

Space prevents an extensive list, so only a few examples are presented here: funerary mounds and monumental tombs where tribal traditions centred on ancestor veneration are evident at some EB sites, but not all sites possess these unique features. Excavations at Halawa Tell A have failed to provide evidence for funerary ancestor rituals. The dead were buried in shaft tombs in the slopes of the mound outside of the walls of the city and no unusual or prominent funerary rituals or ceremonies seem to accompany these burials. Tell Halawa A is characterized by a religious complex in the form of a long-roomed temple-in-antis, set within its own enclosed precinct and featuring other accompanying buildings and shrines (Orthmann 1989: 63–66). It is clear that a lively cult existed at Halawa A, although the religious traditions of this cult were probably quite different from those associated with the ancestor funerary monuments found elsewhere. We wonder if this temple religion is connected, not to the tribal pastoral communities inhabiting the steppes beyond the valley, but to the long-lived settled populations of the river valley. Long-roomed temples of similar plan have been found elsewhere, namely at the sites of Munbaqa, Tell Kabir and Qara Quzaq, and we wonder if their religious traditions are similar to those at Halawa A (Porter 1995: 129–30; Olávarri and Valdés Pereiro 2001:29) It is certainly notable that at the sites where the long-roomed temples have been revealed, no evidence exists for funerary monuments or other evidence related to ancestor veneration.

Turning to Selenkahiye, although the site lacks a large-scale structure on the scale of a palace with a centralized, kingly authority, there does exist an elite household. Dubbed the "Southern Mansion", it was substantially larger than the other buildings of the settlement, and distinguished by a unique configuration of interior rooms, all of which clustered around a central columned room (Fig. 4). The artifacts from the building included unbaked clay sealed jar stoppers, as well as cylinder seals, and they attest to the prolific administrative or economic activities of the building's occupants (Van Loon 2001: 3.35–36, 3.40). This evidence suggests that the Southern Mansion's owners owed their prosperity, not to their connection through kinship ties to some prominent ancestral tradition, or a religious institution, but their energies in the sphere of commerce. The fact that this wealth emanated from a household suggests that perhaps greater scrutiny should be made of the significance of city households, and their important role in structuring the socio-economic organization of EB Euphrates settlements.

On the subject of households, I turn finally now to the site of Tell es-Sweyhat. Located in the centre of a grassy embayment, Tell Sweyhat had a long settlement history spanning much of the Early Bronze Age, but it only reached its fluorescence late in the EB (c. 2300–2100 BCE), after the point when many other settlements had been abandoned or were in decline (Zettler 1997: 51). By this period, Tell es-Sweyhat had grown to a size of 40 ha, and was distinguished by an extensive lower town and city wall. Its most prominent feature was its central elevated mound, where an elite building had been constructed. Dubbed the "Burned Building" owing to the massive conflagration that destroyed it sometime around 2100 BCE, the structure contained numerous rooms where grain, liquids, traded good and household equipment were stored (Fig. 5). But none of this evidence suggests that the inhabitants of this structure comprised a centralized authority that held sway over the entire economic, religious and social life of the settlement. The building lacks the administrative trappings that have been found at other acropolis complexes such as at Ebla and Tell Leilan. Nonetheless the size of the building, its multiple rooms, and its central, elevated position of the building *does*

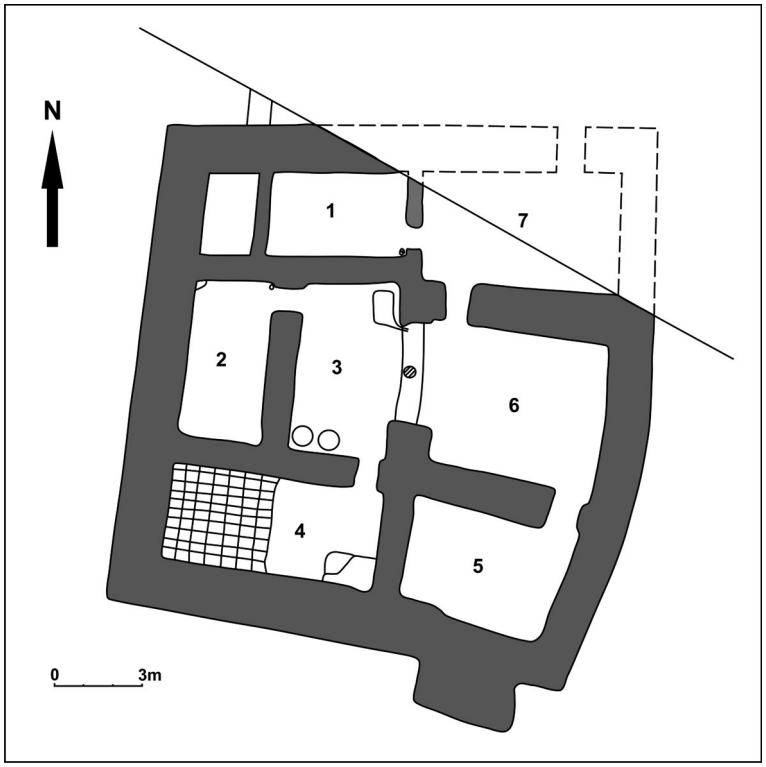

Fig. 4 Southern Mansion, Selenkahiye.

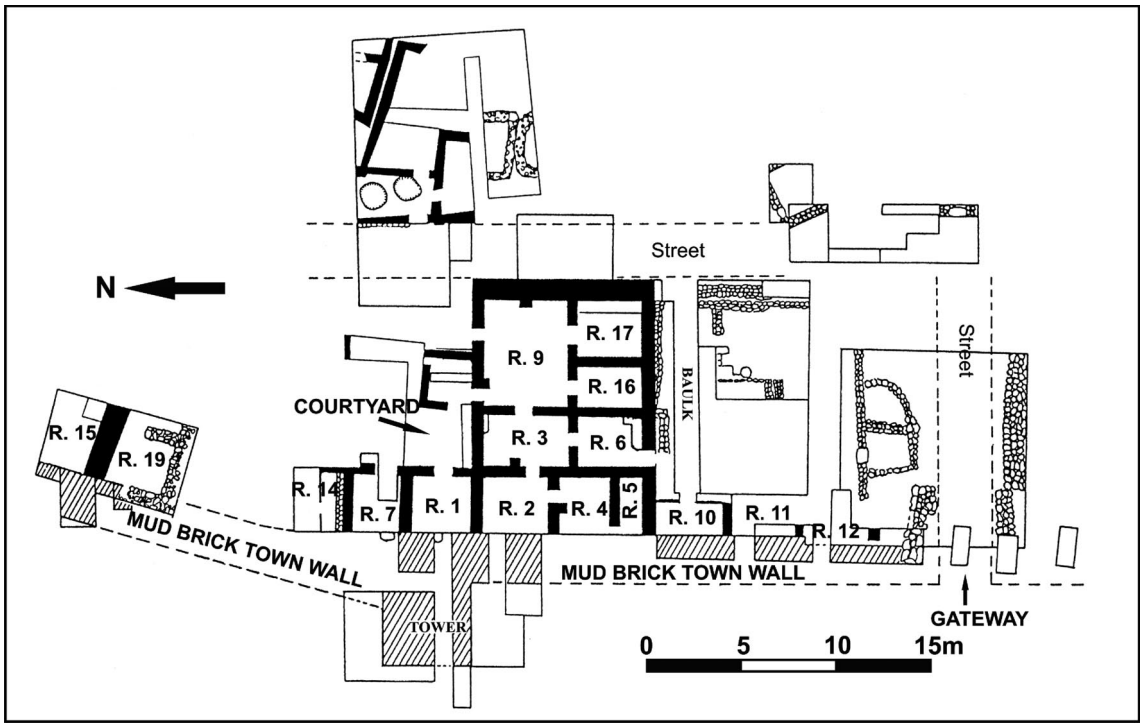

Fig. 5 Burned Building complex, Tell es-Sweyhat.

indicate some kind of wealth and preeminence within the community. Like Selenkahiye, we cannot find any evidence of funerary monuments or elite tombs that can be linked to these elite owners, and thus their position does not appear to emanate from their kinship ties to ancestors. Nor is their connection to any pastoral mobile groups indicated by the nature, layout or contents of the building. Rather, we suspect that the Burned Building's owners accumulated their status through commercial exchanges. This is suggested by the number of imported vessels found within the building, and the discovery of an inscribed cuneiform weight, dating to the UR III on paleographical grounds (Holland 1975). Alternatively, perhaps the owners of the structure attained wealth through a combination of ventures that were both commercial and agro-pastoral in nature. And they may also have been called upon to mediate disputes or make decisions within the community, as suggested by the recent discovery of a contemporary bench-lined "reception" building, which has also been found on the high mound near the Burned Building (Danti and Zettler 2002: 39–40). Whatever the case, we are confronted through the Sweyhat evidence with the development and prominence of a site complex that cannot be easily explained by the pastoral tribal model on its own. We must give consideration to other co-existing and perhaps competing modes of social-economic organization that must have existed at this time and appear to have varied from one settlement to the next. Moreover, evidence for the acquisition of wealth and status within one particularly energetic household forces us once more to look carefully at this urban institution, and factors that enabled households such as this to acquire such fortunes.

In summary, the development of urban society with the Northern Euphrates Valley of the Early Bronze Age is attested, although I have tried to point out that urbanism never developed to the same magnitude as it did elsewhere in Northern Mesopotamia and Western Syria where it accompanied the growth of powerful, centralized states. Moreover, when we look at the individual Euphrates sites, we are struck by the incredible diversity of their size, layout and constituents. Given this variability, it seems overly simplistic to apply one model of social-economic organization to the entire area during the third millennium BCE. On the contrary, one should see a variety of organizational options and the adoption of several different types of socio-political strategies for which the success, stability and prosperity of the settlements and region was attained and maintained for several centuries.

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EVIDENCE FOR PASTORAL NOMADISM IN THE UPPER SYRIAN EUPHRATES REGION[1]

Berthold EINWAG*

"Pastoral nomadic groups have existed throughout Near Eastern history. But their failure was to leave behind written records or abundant physical traces. Therefore the basis of our knowledge is constrained to scanty archaeological remains and written documents of the sedentists and comparative data from ethnographic studies of modern day pastoralists", noted Glenn Schwartz in his article about pastoral nomadism in Ancient Western Asia (1995, 249).

For the Bronze Age period we do not know much about the nomads living in the Upper Syrian Euphrates region. But according to the results of intensive archaeological excavation work in the 1960s and 1990s, initiated by the Assad and Tishreen dam projects, the Euphrates valley itself seems to have been densely covered by urban settlements. May one conclude from this fact that nomadic elements were negligible at that time?

In the following an answer to this question shall be sought by following several paths of argumentation: - the nature of environmental and climatic conditions is essential to understand the extent of tribal communities; - ethnographic analogies of all periods, classical or medieval up to modern times, are important to reconstruct the general living conditions of pastoral nomads and the needs of the livestock; - crucial for the investigation of the existence and formation of tribal communities is the textual evidence which, however, is scarce after the Mari period[2]; - nomadic traces and campsites are difficult to recognize and have been often destroyed by modern landuse. Therefore urban settlements form an important archaeological source to provide informations about pastoral nomads.

1. Pastoral nomads in the Upper Syrian Euphrates region in recent times

The classical author Strabo in the first century B. C. describes in his *Geographica* among other things travel routes through Syria. He advises merchants and other travelers not to use the Euphrates route to Babylonia, because chieftains are living along the Euphrates and each of them has erected his own government taking a tribute of no moderate amount[3].

Around 2000 years later, when Max Freiherr von Oppenheim on one of his journeys passed by the Euphrates in this area, he describes a similar situation[4]. The borders of the Euphrates between Djerablus/Karkemish and Emar/Meskene were occupied by a number of small tribes and there existed no permanent settlements, but only campsites. Also no settlements are recorded in the region between the Euphrates and the Balikh. In the map, which was drawn as a result of Oppenheim's travels, this area is blank, apart from a route crossing it[5]. Oppenheim came from Menbidj and crossed the Euphrates near Sandaliye. Here was one of the few easy crossings of the river until 1999, when

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2 See the contributions of J.-M. Durand, D. Charpin and N. Ziegler in this volume.

3 Strabo, Geography 16, 1, 27.

4 Oppenheim 1939, 267f.

5 Oppenheim 1901, 69–99.

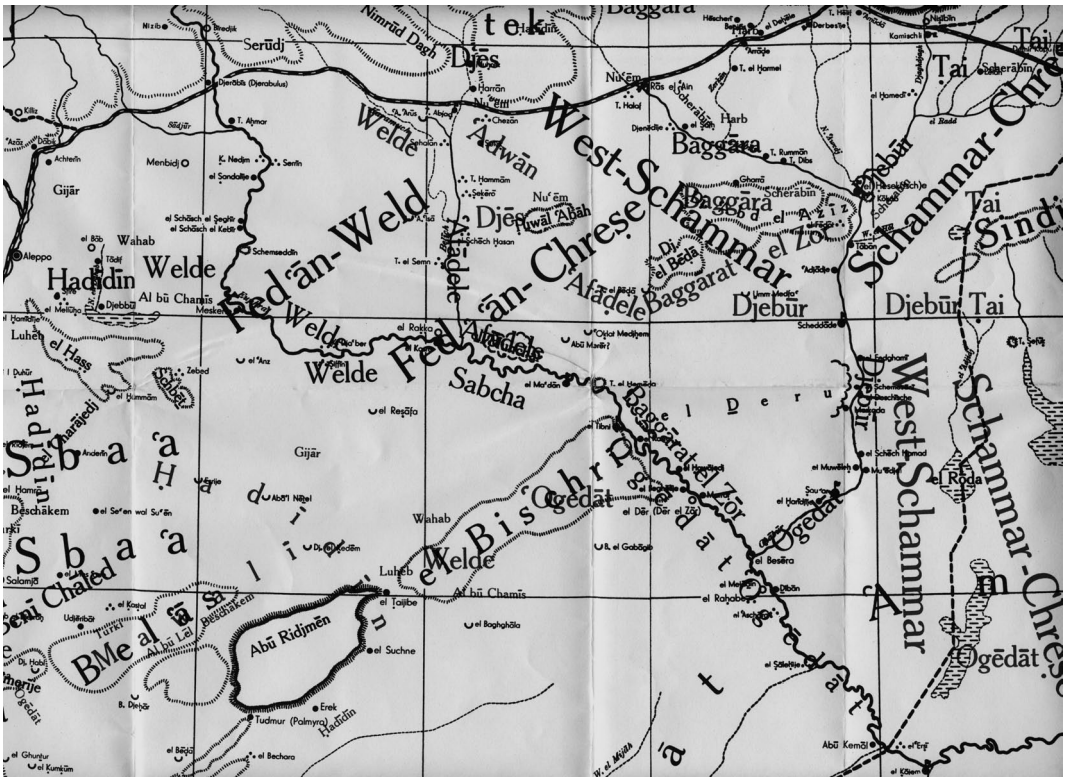

Fig. 1 Seasonal migration of pastoral nomads in the Euphrates area, Syria. (Detail of Oppenheim 1931, Beduinen, Bd 1, Karte: Streifgebiete der Beduinen in Syrien und Mesopotamien) winter-places in light gray, summer-places in black.

the valley was transformed into the Tishreen lake. Oppenheim then followed the river upstream before he headed east towards Tell Halaf.

The purpose of his travels was not only the interest in recording topography and archaeological sites, but he paid special interest in studying the beduins and documented their seasonal movements (Fig. 1). Oppenheim characterized the inhabitants of the Euphrates valley as half-nomads because they kept small livestock, sheep and goats, while real nomads in his definition are camel-breeders.

The largest tribe in the region were the Welde. In summer they lived in the Euphrates valley between Shash Kebir and Raqqa, while the winter-movement led them out of the Euphrates valley to the North and to the Djebel Bishri in the South. In the Euphrates Valley itself they cultivated land by irrigation using water wheels, called Naura, or animal drawn installations. The Welde were found on both sides of the river, because around 1850 A.D. a part of them fled across the river in order to find shelter from the Shammar tribe who were chasing their sheikh because of a blood feud.[6] This illustrates the fact that not only climatic and ecological conditions, but also historical developments can lead to tribal movements. These, however, can only be traced, if they were recorded in writing.

2. Methods of investigating pastoral nomadism in antiquity

Is it possible to trace back some elements of the system described by Oppenheim until antiquity?

Nomadic traces and campsites are difficult to recognize. Frank Hole (2009, 264), whose main research area was in the Zagros mountains, found a number of modern camps during his surveys,

6 Oppenheim 1939, 209f.

but only a few certainly dating back to prehistoric times. One factor is that stone is not commonly found over most of the steppe, so that the evidence of campsites may be restricted to fireplaces, ovens and ditches. The ground surface has changed markedly over the centuries and traces of sites may have been either buried or eroded. Modern landuse contributes seriously to geomorphological changes and causes irreparable damage to archaeological remains (Kouchoukos / Wilkinson 2007).

2.1. Forms of pastoral nomadism

The terms nomadism and pastoralism were discussed by Khazanov (1984, 15–25). Some basic forms which are relevant for our topic may be briefly reviewed:

- *Pastoral nomadism* may be defined from an economic point of view as a distinct form of food-producing economy, in which extensive mobile pastoralism is the predominant activity and in which the majority of the population is drawn into periodic pastoral migrations. Pastoral nomadism was not economically self-sufficient. The production was directed to quite a considerable extent towards exchange. Pastoral nomadism is a single form of food-producing economy, which remains different from other food-extracting economies, but is linked by a series of transitional forms. Pastoral nomadism in its purest manifestation is characterized by the absence of agriculture.

- *Semi-nomadic pastoralism* is characterized by extensive pastoralism and the periodic changing of pastures during the course of the entire or greater part of the year. Pastoralism (animal husbandry) is the predominant activity, but there is also agriculture in a secondary and supplementary capacity. Semi-nomadic pastoralism, like pastoral nomadism, is also dependent on the sedentary population.

- *Semi-sedentary pastoralism* differs most fundamentally from semi-nomadic pastoralism. Agriculture plays the predominant role in the general economic balance. Semi-sedentary pastoralism also implies the presence of seasonal migrations. However, these migrations are often shorter in both time and distance.

- *Sedentary animal husbandry* is the basic form of economy in primitive and traditional societies. Animal husbandry only supplements agriculture. There are many variations of this type.

From the study of the different forms of pastoral nomadism two facts emerge: 1. there is no dichotomy between nomadism and sedentarism but there are various transitional forms, 2. Pastoral nomadism is not self-sufficiant but dependent on the outside (sedentary) world.

The transitions between the different forms have to be considered as fluid, in many steps and stages, sometimes concerning only parts or certain families of the tribal community. The development can change direction with greater or lesser involvement with agriculture. People may give up practices for various reasons, e.g. as a result of a new economic strategy or as an adaptation to environmental changes.

2.2. The impact of the climatic conditions

An examination of the annual precipitation (Wirth 1971, map 3) may show the possible extent of pastoral nomadism. The 200 mm line is generally thought to be the limit of rain-fed agriculture. The data on annual precipitation in dry years (Wirth 1971, map 4) show a dramatic shift of the 200 mm line towards the north. Although the data are of modern origin they may be applied *cum grano salis* to ancient times. Longer periods of drought forced people to change their economic strategies. Frank Hole (2009, 261) emphasized that even in the 300 mm precipitation zone the harvest is generally lost in 3 out of 10 years. In the 150 mm zone only one successful harvest in 10 years is usual.

Transferring this analysis to the region between the Euphrates and the Balikh (Fig. 2) it is evident that the area south of the 200 mm line of annual rainfall in dry years is risky for rainfed agriculture and not very suitable for permanent settlements. This is immediately visible in the settlement pattern: outside the Euphrates and the Balikh valleys, settlements of preclassical times seem to have existed only in the northern part, as indicated by a survey conducted in this area during the 1990s (Einwag

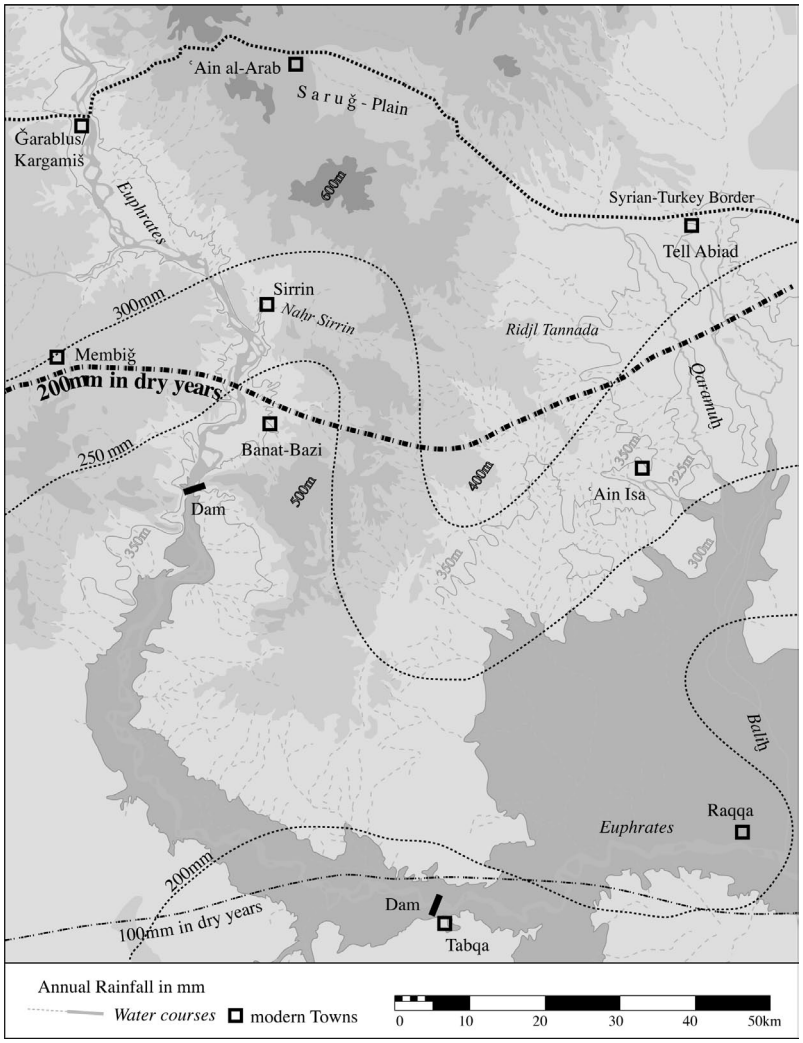

Fig. 2 Annual Rainfall in the region between the Euphrates and the Baliḫ (according to the data of Wirth 1971).

1993, Einwag 1993/94). The fertile north, where rainfed agriculture is possible, is densely occupied (Fig. 3). In the dry southern part there are nearly no settlements outside the catchment of the Euphrates valley, agriculture is not possible, and until recently it was populated by pastoral nomads only.[7]

According to the climatic conditions, pastoral nomadism was the most probable form of ancient landuse within this area and also to the south of the Euphrates. On the other hand, pastoral nomadism is not only an adaptation to the environment, but also to the non-nomadic world. Despite the ability of pastoral nomads to retreat into the desert or steppe for longer periods in order to escape state authority (as is reported in several Mari texts), they are not economically self-sufficient. Their economy makes them dependent on many products of the sedentary world, e.g. they need handicraft and agricultural products. They have to buy them or to exchange them for nomadic products such as meat, dairy products and wool.

Oppenheim at the beginning of the 19th century A.D. noted that the Welde frequented the markets of Meskene, Raqqa, and Aleppo, which he named caravan towns. Is it conceivable that in the Late Bronze Age sites such as Tell Munbaqa and Tell Bazi may have served similar purposes?

7 Large scale irrigation projects resulting from the newly built dams have considerably changed the southern part within the last 10 years.

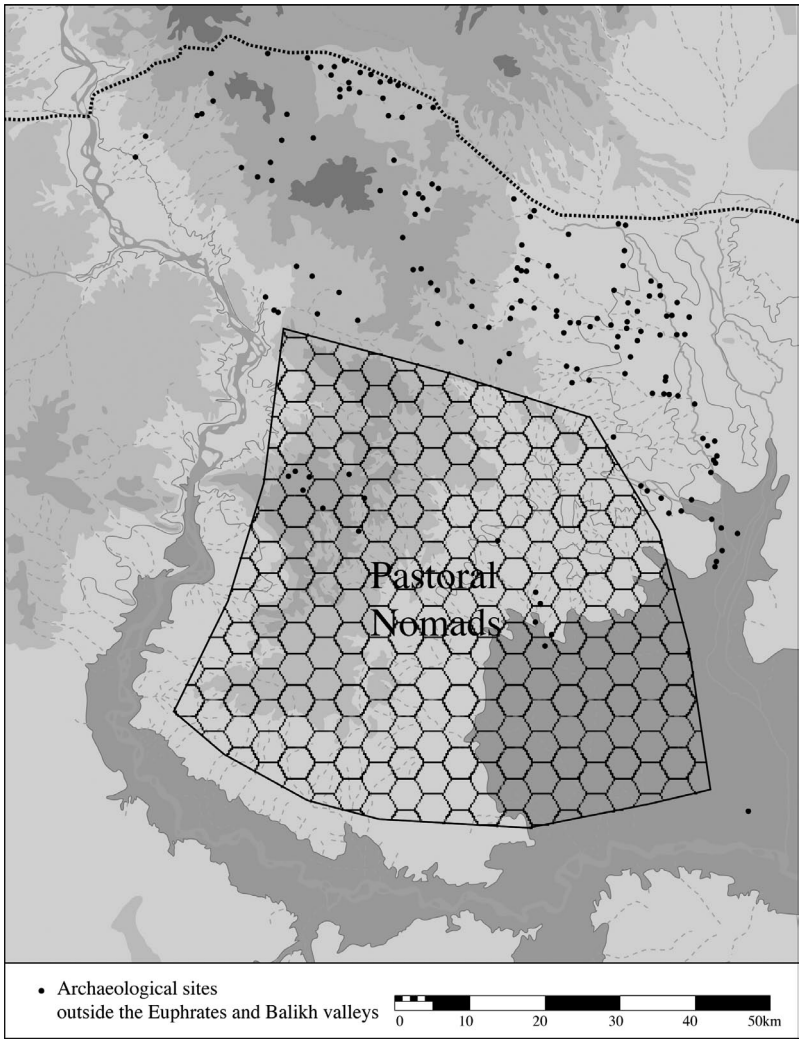

Fig. 3 Landuse in the region between the Euphrates and the Balih.

3. Urban settlements as sources of information about pastoral nomads: The examples of Tell Bazi and Tell Munbaqa

Tell Bazi is located on the eastern bank of the Euphrates. The citadel, fortified in the late Early Bronze Age[8] and in use until the Late Bronze Age, lies on a mountain spur protruding into the Euphrates valley (Fig. 4).[9] The Northern Lower Town is the older part of the urban settlement, going back at least until the Middle Bronze age. The Western Lower Town (Weststadt) is a settlement enlargement of the Late Bronze age, built on a gravel terrace slightly above the Euphrates valley. This valley constitutes an extremely fertile stretch of land where irrigation leads to good agricultural results. However, the area which is not suitable for agriculture starts immediately beyond the river valley (Fig. 5).

In the Western Lower Town 50 houses were excavated from 1993 to 1999, before they were covered by the Tishreen Lake (Fig. 6). The houses were of an extremely uniform groundplan,

8 It was the citadel of the extensive Early Bronze Age city represented by the remains of Tell Banat possibly to be identified with Armium/Armanum (Otto 2006b).

9 Einwag et al. 1995; Einwag/Otto 1996; Otto/Einwag 1999. After the Late Bronze age the top of the Citadel was reused in Roman times.

Fig. 4 Tell Bazi, view from the west bank of the Euphrates: the citadel in the middle and below to the right, the flat terrace of the western lower town (Photo: A. Otto).

Fig. 5 The arid hinterland of Tell Bazi. (Photo: A. Otto).

consisting of a large rectangular main room and a row of usually 3–5 square rooms on the long side. The houses are arranged along two large streets and around a central place in the middle. The inventory proved to be so repetitive, that it was possible to reconstruct the ideal typical house (Otto 2006a, 39–46).

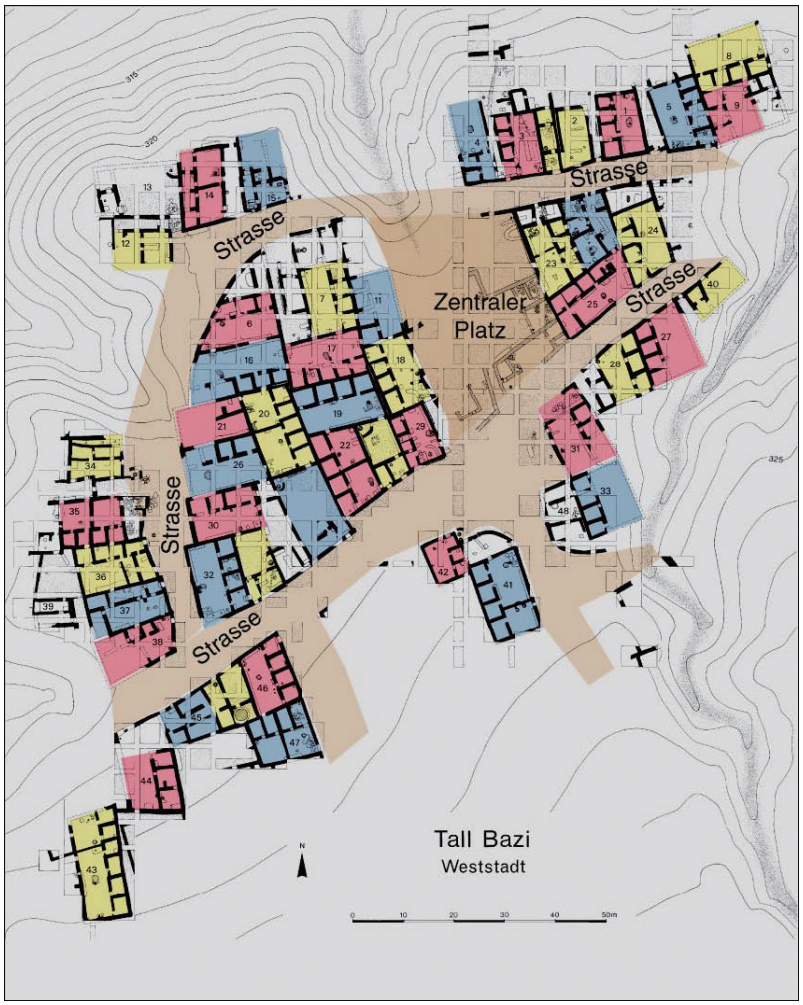

Fig. 6 Schematic plan of the Late Bronze Age Western Lower Town of Tell Bazi.

When the settlement was destroyed and heavily burnt by a sudden incident, the inhabitants disappeared and left considerable parts of the inventory behind, including even valuable objects and weapons. Many houses served not only for domestic purposes but also for handicraft activities. Some were specialized in the production of jewellery, bronze tools and weapons, or weights made of goethite, an iron oxide similar to hematite, which can be found in the vicinity of Bazi (Otto 2006a, 8, 282).

There are two points which are especially suitable for illuminating the economic relations between the sedentary people and various pastoral nomad groups.

- The diet: The sudden end of the Western Lower Town allows us to reconstruct the last meal prepared in some houses in the form of a heap of bones in cooking pots or near the hearth. In many cases the bone remains stem from different animals: in House 23-S from sheep/goat, cow, equid, and duck, in House 22 from donkey, sheep/goat, cow, pig and dog, in House 41 from sheep/goat, donkey and cow (the examples could be continued). The fact that not one single animal has been eaten, but small portions of different animals, points to the exchange or the purchase of meat from other inhabitants of the settlement or to a supply from outside.

Summarizing the results of the palaeozoological study by A. von den Driesch, it can be remarked that the main supply of meat came from sheep; cow, goat and equids were eaten frequently, fish, shells, dogs and hunted wild animals only occasionally. It is certain that the animals were not kept in the houses of the Western Lower Town. Probably they were kept in the vicinity of the town by villagers, seminomadic or nomadic herdsmen, or they were purchased from them.

The Emar texts may refer to a similar situation a little downstream. Only about 15% of the inheritance documents mention animals, mostly sheep and goats and, to a lesser extent, cattle. This may suggest that the keeping of animals was not usual for the households. Several Emar documents mention shepherds who were responsible for the herds belonging to the urban inhabitants (Otto 2006a, 290–91).

- Specialized production: As mentioned above, several houses specialized in handicraft activities. The production of specific goods, such as tools and weapons, jewellery, and weights, exceeded the local requirements of the settlement. This over-production seems to have been intended partially for the interregional trade, and partially for the regional market, which presumably also included the needs of the pastoral population.

A further inidcation of the presence of pastoralists may be sought in the special social structure of the Late Bronze Age settlements in this area. An outstanding phenomenon, compared with contemporary palatial societies, is the absence of administrative or palatial structures in the settlements of the region. One example is Tell Bazi, which consisted of an extended domestic quarter in the Western Lower Town and a temple on top of the Citadel (fig. 7), another one is Tell Munbaqa, ancient Ekalte (Fig. 8). Munbaqa has been excavated on a large scale and the remaining area was surveyed by magnetic prospection. It is obvious that there existed no palatial structures, only houses and temples. Only a single text from Munbaqa (Mayer 2004, No. 62), which documents a property sale by the city and the god, mentions the palace: 1000 shekels of silver should be paid to the god Ba'alaka and to the palace as a penalty. On the same tablet is found the impression of a seal, which is identified on another tablet as the "seal of Yahsi-Ba'la, the king" (Werner 2004, 21–2). This seal of the king of Ekalte was a normal private seal without any characteristic of a royal seal. Apparently there existed a king and even a palace at Ekalte side by side with other powerful collective organizations. The "palace" of the "king" of Ekalte must have been no more than one of the larger houses, because

Fig. 7 Three-dimensional model of the Western Lower Town and the Citadel of Tell Bazi (design by Hinz und Franz, 3D-Computergraphik, München).

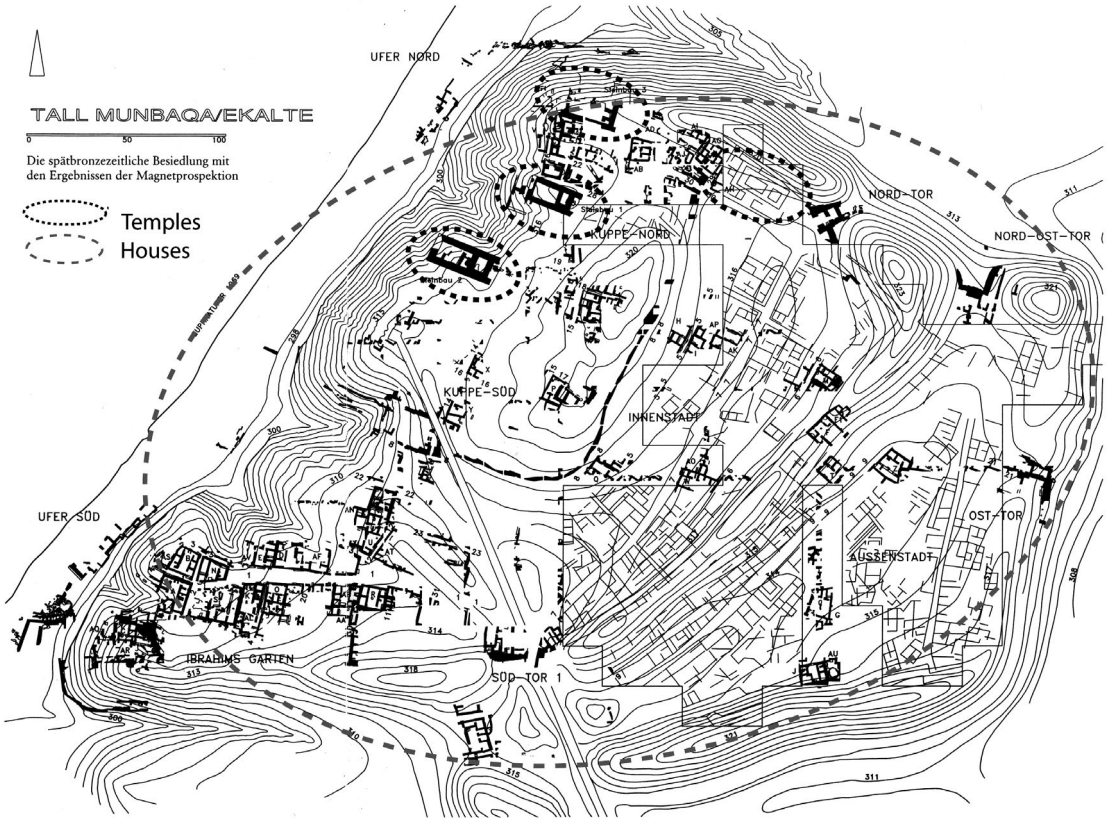

Fig. 8 Plan of Munbaqa/Ekalte (Werner 2004, Pl. 48) showing the temples and houses.

there is no space available for a larger palatial structure in the city of Ekalte. But if the palace was just the house, where the king resided and did not have to fulfill major administrative functions, the size of a larger house would have been enough for this demand.

The cuneiform texts discovered at Meskene/Emar, Tell Munbaqa/Ekalte, Tell Hadidi/Azu, and Tell Bazi/Baṣīru(?) show that the whole region of the upper Syrian Euphrates valley shared the same peculiar social structure. The cities were directed by the city-god together with the elders of the city. They are the owner of the land, are involved in the real estate transaction, treaties, and other official city affairs, and they possessed their own seals. A king is mentioned in several legal documents from Emar and Ekalte as first witness, and he gives considerable numbers of animals at the occasion of the main festivals, but otherwise there are no indications that he had an outstanding position. Daniel Fleming (1992, 59f) speaks of the "limited nature of kingship in Emar".

One gets the impression that the king was the "primus inter pares", who was obliged to be munificent, but was not more powerful than the others. May we infer that he disposed of auctoritas but not of potestas?

The "Brothers", a collective entity, written "aḫḫu" and not "šeš" like the sons of the same father, are made up of the male members of the city's families. They assembled at the request of one of the Brothers in order to settle private legal affairs. At Ekalte the "Brothers" owned seals and employed a herold. At Azu a "Chief of the Brothers" is attested (Beckman 1997; Mayer 2001).

A consistent explanation for this outstanding social structure is still missing, but nomadic roots have been suggested (Arnaud 1980, 255–9). Nomadic pastoralists are typically organized in tribal structures with a considerable variability of political organizations ranging from relatively decentralized and little stratified groups to large hierarchical chiefdoms. Of course, as far as Tell Munbaqa, Tell Bazi and the other sites are concerned, we are dealing with a sedentary population. But, coming back to Oppenheim's description of the Welde around 1900 A.D., who although now settled

still live in almost the same area today, they have kept their earlier tribal form of organization. In general, tribal societies are based on the premises of equality, autonomy and the acquisition of reputation. Tribal polities are participatory democracies and are organized within a segmented lineage system of a common ancestor. In segmented tribal societies decision-making is democratic. Coercive capacities, including skills and weapons, are widespread throughout the population, and no leader, élite, or small clique is capable of enforcing a policy against the will of the majority (Salzman 2004, 133).

Power is based upon consent and a sheikh's primary task is mediation and negotiation. It may be supposed that an analogous situation was present in the Late Bronze Age settlements of the upper Syrian Euphrates region. A comparative study would certainly be fruitful, but has not yet been carried out.

The two tablets found at Tell Bazi do mention neither a king nor a palace, but suggest that the Elders were the supreme governing body (Sallaberger / Einwag / Otto 2006). This is not proof that there had never been a king and a palace at Bazi, but, if there was a palace at Bazi, it must have been a larger house, comparable to that suggested for Ekalte, because the Citadel and the lower town have been thoroughly investigated. The place, where the Elders came together, might have been the temple. Numerous beakers and remains of meals indicate eating and drinking took place in the temple (Otto / Einwag 2007).

The temple of Tell Bazi is remarkable. It was built in the Middle Bronze Age with an enormous effort. Its size (37.60 × 16.0 m) is exceptional for contemporary Syria and it covers a large part of the Citadel (see Fig. 7). An associated Middle Bronze Age settlement of considerable size is still missing. Even if it lies buried under the Late Bronze Age levels of the Northern Lower Town, it was certainly much smaller than the Early Bronze Age settlement of Banat-Bazi[10] and the Late Bronze Age one of Bazi. Who then deserved a temple of this extraordinary size and maintained it for several centuries? Several Mari texts testify that tribal authorities frequented the cultic installations of the cities. Is it possible that the nomadic pastoralists were not only economically involved with the settled population of the region, but also participated in the cultic and ritual ceremonies?

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TRIBAL COMMUNITY AND STATE: THE CHANGE OF SETTLEMENTS AND SETTLEMENT PATTERNS IN UPPER MESOPOTAMIA DURING THE 3RD MILLENNIUM B.C. – A RE-EVALUATION

Jan-Waalke MEYER*

At the ICAANE 2000 in Copenhagen I was still of the opinion that the origin of Tell Chuera (Fig. 1) and the other settlements of the so called "Kranzhügel"-culture might be explained by the sedentarisation of tribal nomadic groups. Considering the results of our work at Tell Chuera in the past years it seems no longer possible to stick to that opinion as fast as before – although in the meantime quite a few publications have come forth that argue along those lines[1]. Today I should like to give you an overview over the settlement history at Tell Chuera and the respective settlement cluster and raise the question again after the protagonists of that development[2].

Fig. 1 Satelite image of Tell Chuera.

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1 Most recently Lyonnet 2009:179–200, with further references.

2 Compare several contributions in the latest final publication of the excavations at Tell Chuera, Meyer (ed) 2010 (in press).

The settlement at Tell Chuera was founded as an urban centre at the beginning of the 3rd millennium, around 3000 B.C. (EB I) (**TCH IA**). At that time, only the region of the later Upper Town was occupied, an area of ca. 50 ha, at any rate. Certain elements of urban planning are already recognizable; they will be retained down to the last phase of usage towards the end of the 3rd millennium, around 2200 B.C. (TCH ID/E): among them are the central square, the "Anton Moortgat Square" (Fig. 2), laid out at the time of the foundation, and the central axis, which runs right through the (later) Upper Town. The Square is bounded by private houses.

This EB I settlement was already surrounded by a massive town-wall.

The system of streets orientated radially towards a centre was realized in the local period **Tell Chuera I B**, EB II, ca. 2700 B.C. (area K). As the course of lane A takes into consideration previous lot boundaries, it does not look as if the settlement was completely reorganized; furthermore, the sequence of building phases for the earlier structures continues smoothly, not showing any discernible breaks.

At the same time, the outer town-wall was erected; the inner town-wall, thereby losing its fortificatory function, was, in subsequent periods, integrated into the adjacent buildings.

Besides standard wares, the ceramic inventory comprises a few examples of excised and incised Ninivite 5, but there is also Karababa ceramics and the first specimens of Metallic ware (only conical cups).

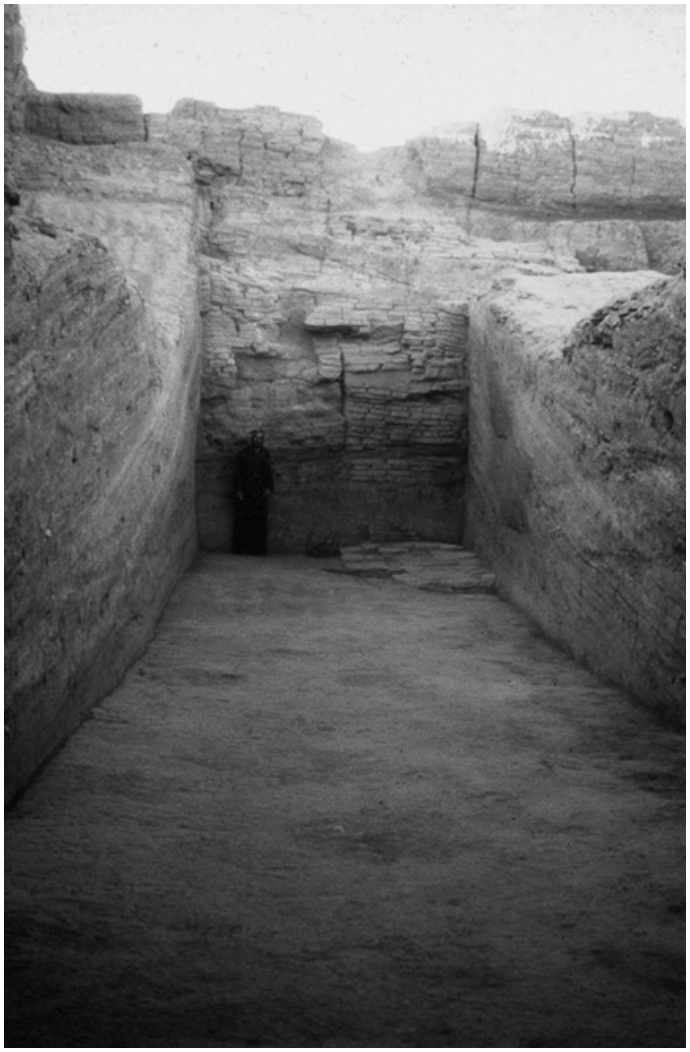

Fig. 2 The so called "Anton-Moortgat-Square" in the center of the city.

Period **Tell Chuera IC** (EB III) sees a further important enlargement of the town. To this period belong the erection of the temples in areas A and S and the accompanying notion of the "Holy Districts". While for "Steinbau" I (area A) and "Steinbau" III (area D) this phase has only been ascertained by small soundings and by the exposure of earlier stairs, Temple S (= "Steinbau" VI) is by now extant in a sequence of three building levels, each with several phases that comprise a time span from Tell Chuera IC to IE; any hints at predecessors are lacking so far.

The temple of period IC experiences two extensive building phases with several remodellings each. The outer walls consist of mud bricks without stone foundations (Fig. 3). Walls, floors and the numerous installations in the interior were all covered with several layers of a white coating. Besides a large amount of pottery, the debris of the earliest phase yielded a fenestrated axe, a bronze hatchet as well as several copper ingots and bucrania. Obviously, this phase ended in a huge catastrophe; reconstruction took place in that same period IC. As a deep sounding in the area of the later procella could not be carried through, it remains an open question whether this temple was already designed as an antae temple.

As in the earlier periods, private houses rose to the east and to the west of the central axis, which were liable to undergo continual change. It became clear that the lots were not unchangeable entities but that, from one building phase to the next, they might be enlarged or diminished by combining or dividing rooms or courtyards. Accordingly, it was not possible to determine one typical ground plan of a house, but various "types of houses" that may differ considerably. We will come back to the burials that are connected with the houses.

In this period at the latest, intensive building activities start in the Lower Town; it is covered by a network of streets some of which take up the course of the streets in the Upper Town.

A relatively exact 14C date puts the end of that period at 2465 +– 20 (corn and poplar).

The best known period is probably **TCH ID** (EB IVA). The results of the measurings and of the excavations up to this point allow - with all due caution - to deduce the architectural and functional

Fig. 3 Steinbau VI (Temple S): The interior of the EB III-building.

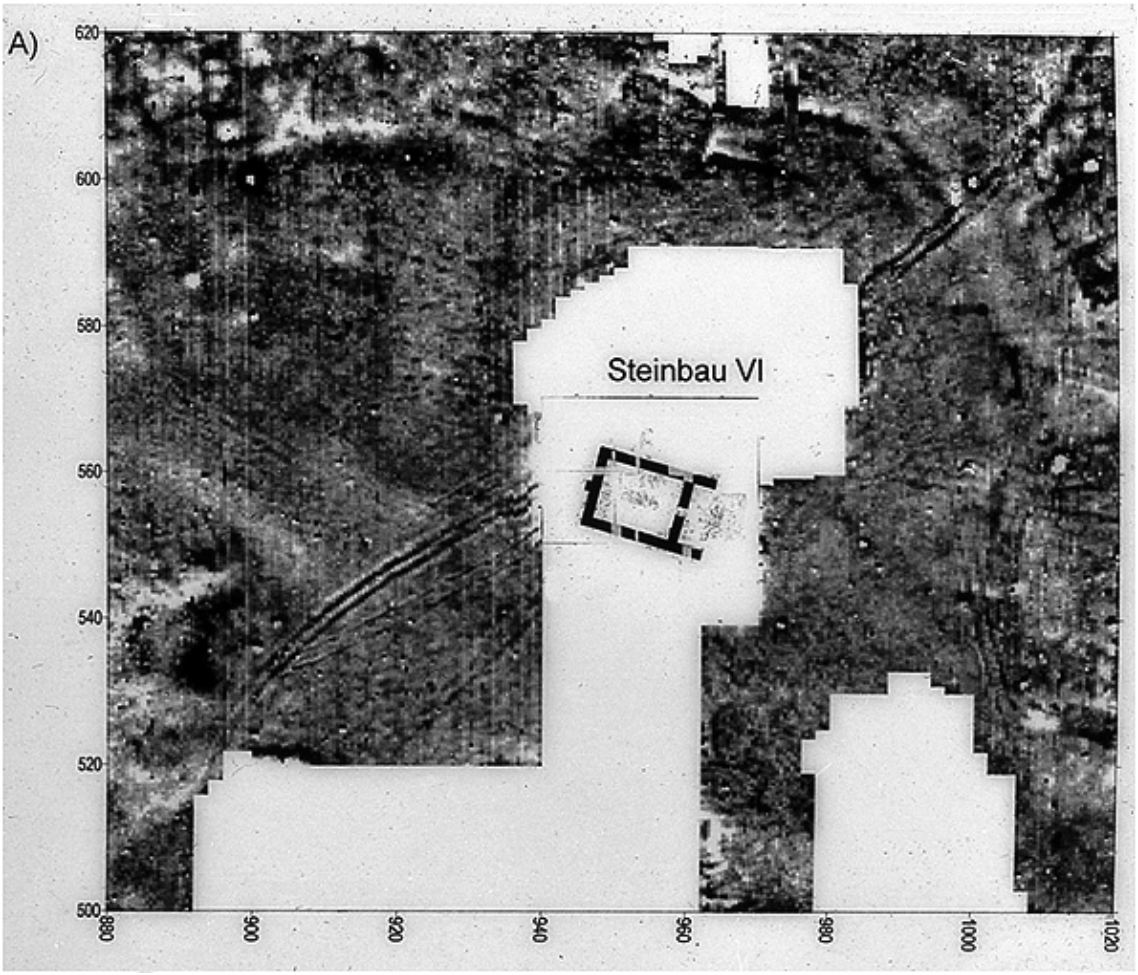

Fig. 4 The geophysical prospection of the center with the plan of Temple S (EB IVA).

layout of the Upper Town; a number of conceptual details can be seen as elements of urban planning:

One of them is the open square in the centre – the "Anton Moortgat Square", also determined archaeologically -, on which the streets of the Upper Town converge radially. The east side of the Square is still taken up by "Steinbau" VI (area S), which is probably separated from the profane regions by a round or oval temenos wall (Fig. 4).

The two later levels of this building - definitely antae temples - have outer walls on stone foundations and various mud brick installations, such as platforms and benches (Fig. 5). Among the most important finds are depositions of a composite statue made of bronze and stone over a wooden core, and another bucranium.

Apparently, the centre of the Upper Town was encompassed by a circular street (Figs. 6–7). Also the southeastern access to the Upper Town (Fig. 8), the central axis, ends on the "Anton Moortgat Square", which extends towards the northwest and opens into another square in front of Palace F.

Surprisingly, the public buildings - temple and palace - are mainly restricted to the vicinity of the central axis , while the dwelling quarters take up the southwest and the northeast of the Upper Town.

The expansion of the town begins with the settling of the Lower Town in the course of period IB (area P), from period IC a comprehensive extension sets in. The complete Lower Town is covered by a network of streets laid out in a regular pattern. Besides the radial streets – some of which lead right into the Upper Town – another circular street serves the complete Lower Town. The results of excavations and geo-magnetic investigations suggest that this part of the town may possibly have

Fig. 5 The entrance of Temple S (EB IVA).

been used for production and storage in the first place.

At least in period ID the town-wall takes a polygonal course. Fortificatory efforts have brought forth a glacis shaped like a dike and bastions at regular intervals (Fig. 9).

Finally, the existence of an extensive Outer Town should be mentioned; it is situated north of the cult-building of the "Außenbau" and consists of places for production, including a canal coming from the wadi. If Alfonso Archi's proposed equation of Tell Chuera with Abarsal is correct, we might here be in front of the kar abarsal[3].

To my opinion, the ensuing image of the town and its organization – already beginning at the time of foundation around 3000 B.C. – is hardly imaginable against a background of nomadic structures.

- Installation of a planned town with a planned network of streets and a specified house-building plan
- central, administrative axis
- mighty fortifications using up ca. 30 million bricks for the inner town-wall and ca. 40 million for the outer town-wall

Also the organization of the surroundings speaks against a founding by nomadic groups.

The survey in the vicinity of Tell Chuera is almost completed by now; it has proven the existence

3 Archi 1998:4.

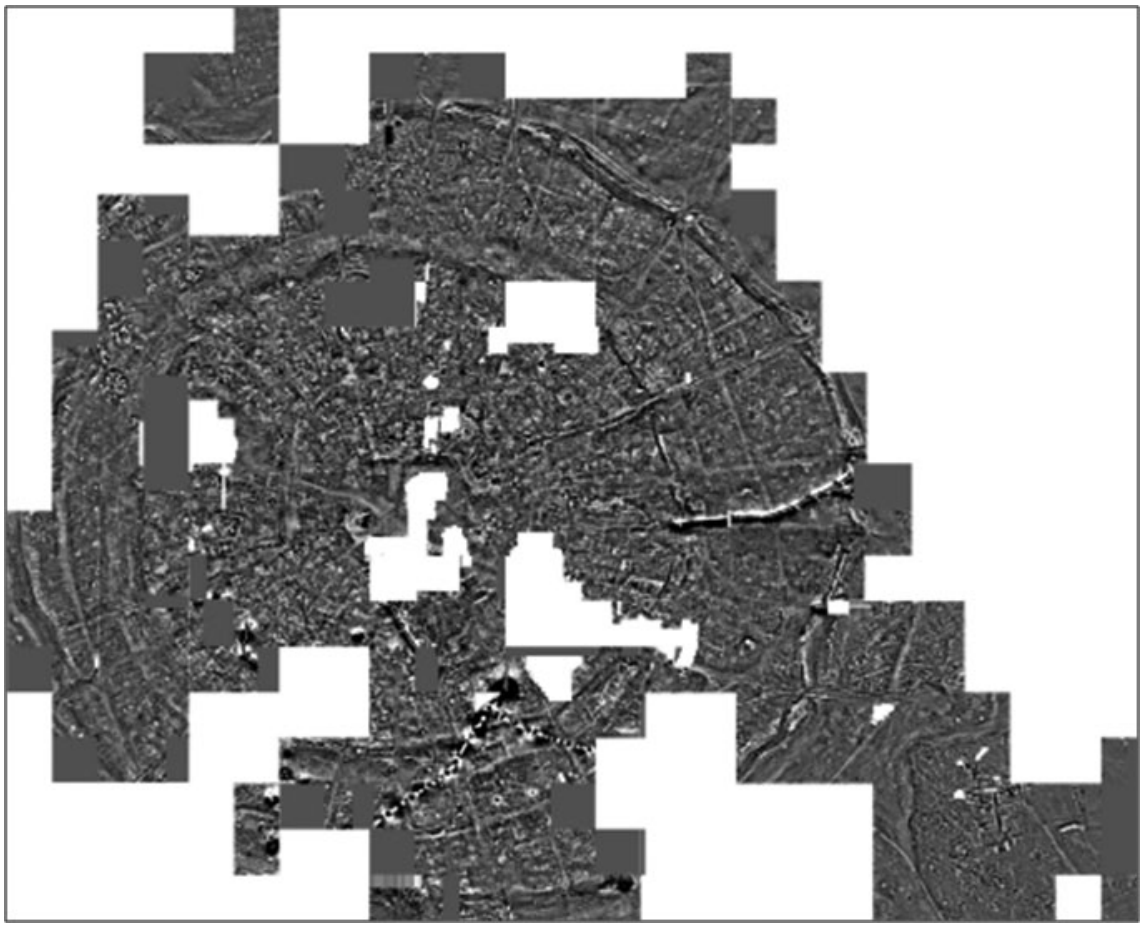

Fig. 6 The plan of the geophysical prospection.

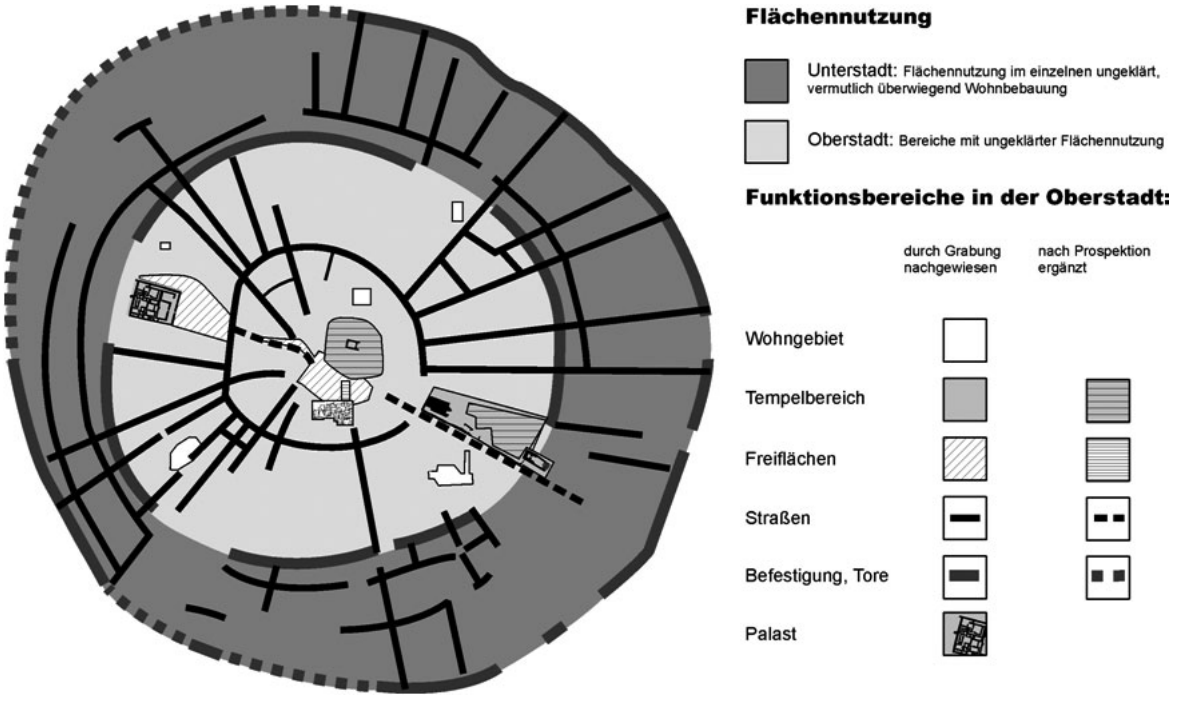

Fig. 7 Reconstruction of the planned city according to the results of the geophysical prospection (c. Fig. 6).

Fig. 8 The southeastern part of the central axis (EB IVA).

Fig. 9 City wall with bastion (EB IVA).

of a dense network of settlements consisting right from the start, around 3000 B.C., of at least three levels – Tell Chuera, Kharab Sayyar, Mgeddi – and at the latest from period Tell Chuera ID (EB IVB) of, at any rate, four levels.

In period ID the surroundings of Tell Chuera were run through by canals. Either they make use of small tributary wadis or they interconnect larger wadis. This finding leads to the conclusion that much more water must have been available in the 3rd millennium than has so far been assumed. The large wadis, such as Wadi Tell Chuera or Wadi Dehliz, where the settlements of the first and

second categories were situated, must have carried water all year round. Small farms (under 0.5 hectares) appear at more or less regular intervals along the canals; besides there is a relative large number of smaller settlements (villages) of 2 to 5 hectares, even in the immediate neighbourhood of the central places, such as Tell Chuera (1st category) and Kharab Sayyar (2nd category, not counting the extension of the town).

Basically, agriculture by irrigation is to be expected, at least to a certain extent, an expectation that has now been confirmed by excavations in Tell Chuera itself. Especially for periods ID and IC, numerous drainage canals were ascertained, some of them of quite large dimensions and obviously meant to carry off excess water.

Apparently, the care of the fields as well as of the canals came mainly under the responsibility of persons living out of town. During harvest-time, large portions of the town's population could be summoned as helpers. Sickles and other pertinent tools were found in almost every house. For most of the year the town's population was called to other tasks: the construction of the town-wall(s), the erection of public buildings such as a palace, extensive temple districts, but also the production of corn or textiles for home needs as well as for the acquisition of raw materials and finished products.

Certainly, the organization of the town and its surroundings could not be accomplished without a strong and influential leadership, which, from period ID (EB IVA) at the latest, is located in the palace.

On the other hand, the excavations have also brought forth findings that point to tribal structures within the population. The most important such indications are graves dug underneath the houses of area K. Intramural burials are very rare in Tell Chuera; as a rule, burials are placed outside the town in large necropolises.

In two of the private dwellings burials were found below the earliest floor. They may be the burials of founding ancestors, originally heads of families to whom a close relationship was maintained even after death.

This kind of ancestor worship is typical of segmentary tribal societies, as they are to be expected in the Ancient Near East[4] (compare my statements concerning the cemetery of Abu Hamad).

Traces of a segmentary tribal society are perhaps even more distinctly recognizable in the construction of the town-wall where - at least in Kharab Sayyar, but probably also in Tell Chuera - the joints are congruent with the delimitations of houses.

I should like to suppose for Tell Chuera a tribally organized society with - at the latest from the mid-3rd millennium, but probably from the very start - a well-defined political leadership (compare Ebla).

Our work in Tell Chuera and its surroundings would not have been possible without the generous logistic support by the DGAM, especially by Dr. Michel Maqdissi and Dr. Bassam Jamous. But our thanks go likewise to the great number of local workers and to our Syrian and European collaborators. The main financial support came from the German Research Foundation; other means were granted by the Oppenheim Foundation and the association ENKI.. Numerous details of this lecture are based upon research and upon doctoral theses, some of which have not yet been published; I should like to mention the names of Christian Falb, Tobias Helms, Ralph Hempelmann, Veronika Kudlek. Many thanks to all of them.

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PART IV

HISTORY OF TRIBAL COMMUNITIES IN SYRIA: CITIZENS AND NOMADS VIEWED FROM PHILOLOGICAL EVIDENCES

"ROD AND RING": INSIGNIAS OF FOREIGN RULE IN THE UR III AND OB PERIODS†

Kazuya MAEKAWA*

I. "Rod and ring (and rope)" in artistic representations

1. "Rod and ring"

In the "rod and ring" theme, a god holds, in his right hand, what look like a pole and a ring in front of a standing king. These images were drawn on stelae, wall paintings, and cylinder seals in Mesopotamia until the middle of the first millennium BC. The most well-known examples of the "rod and ring" are found on the Hammurabi Law Code Stela (Fig. 1), and on the so-called "investiture" scene of King Zimri-Lim (?), painted on the Mari palace wall (Fig. 2).

"Rod and ring" representations are not always identical. For example, the god Šamaš holds the "rod and ring" and sits on a chair before Hammurabi, whereas Ištar is standng before Zimri-lim (?). The latter king seems to touch the "rod and ring" with his left hand, but Hammurabi does not.

Many Old Babylonian cylinder seals have the "rod and ring" theme. Here the "rod" is usually very short, and looks like a "peg." The upper end of the "rod" is brimmed, while its lower end is tapered sharply. This is a characteristic of the Old Babylonian cylinder seals, which is why Dominique Collon called it the "wedge and ring," instead of the "rod and ring" (Collon 1986: 30).

On the stela which was unearthed from Susa, the god Šamaš grasps the "rod and ring." Here, the king is performing a libation ritual in front of the god. Libation is frequently illustrated in third millennium art.

A different type of "rod and ring" theme is found on the cylinder seal impression of Šu-iliia, the king of Ešnunna, whose reign possibly dated to the near end of the Ur III period (Fig. 3). This seal depicts the city-god of Ešnunna, holding in his right hand the "rod and ring," and in his left hand, the two ropes that are tied to the noses of two enemies. The king, standing before the god, touches the "rod and ring."

We can see that, despite these differences, the way of drawing the "rod and ring" remains the same in those compositions.

2. "Rod, ring and rope" on the Stela of Ur-Namma (1)

Since the discovery of the Hammurabi Law Code, many different interpretations of the representation have been offered. Most important among the early interpretations was that of F. Thureau-Dangin, published in 1912. According to him, the two Akkadian words *haṭṭu* and *kippatu* (meanings "scepter" and "ring," respectively), which he found in first millennium inscriptions, refer to the image depicted on the Hammurabi Law Code Stela (Thureau-Dangin 1912: 375[9]).

The situation was changed radically in 1925, when fragments of the stela of King Ur-Namma were unearthed at Ur. Both Leonard Woolley, who directed the excavations, and Leon Legrain, who worked for the University Museum of Pennsylvania, immediately regarded the second register of

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† This is the draught paper which I read on November 23, 2009 at the Symposium "Formation of Tribal Communities: Integrated Research in the Middle Euphrates, Syria" (held at Ikebukuro, Tokyo). The limitation of the time allowed for presentation prevented me to offer sufficient iconographical and philological evidence. Therefore, I will soon publish a long article on the same topic elsewhere.

Fig. 1 Top of the Hammurabi Law Code Stela. Moortgat 1969: Pl. 209.

the so-called "Good Face" (or Face A) of the stela as the origin of the later "rod and ring" representations (Fig. 4). They thought that what the god holds in his right hand is a pair of measuring implements, that is, a yardstick and a measuring rope (Woolley 1925: 49, 53; Legrain 1927: 84, 86). Since construction work is pictured on the third and fourth registers below the image, Woolley and Legrain interpreted that the god had ordered the king to construct (the ziggurat of) the temple.

Strikingly, the Ur-Namma Stela solely depicts a loop of one or several ropes below the "ring." Woolley explained that one end of a coil of rope was loosely looped down.

Many scholars have followed Woolley's theory, also assuming that the Ur-Namma representation was the origin of the later "rod and ring" compositions (e.g., Frankfort 1937: 179; Jacobsen 1987: 4; André-Salvini 2008[2]: 22). A prevailing opinion, whether explicitly mentioned or not, is that a

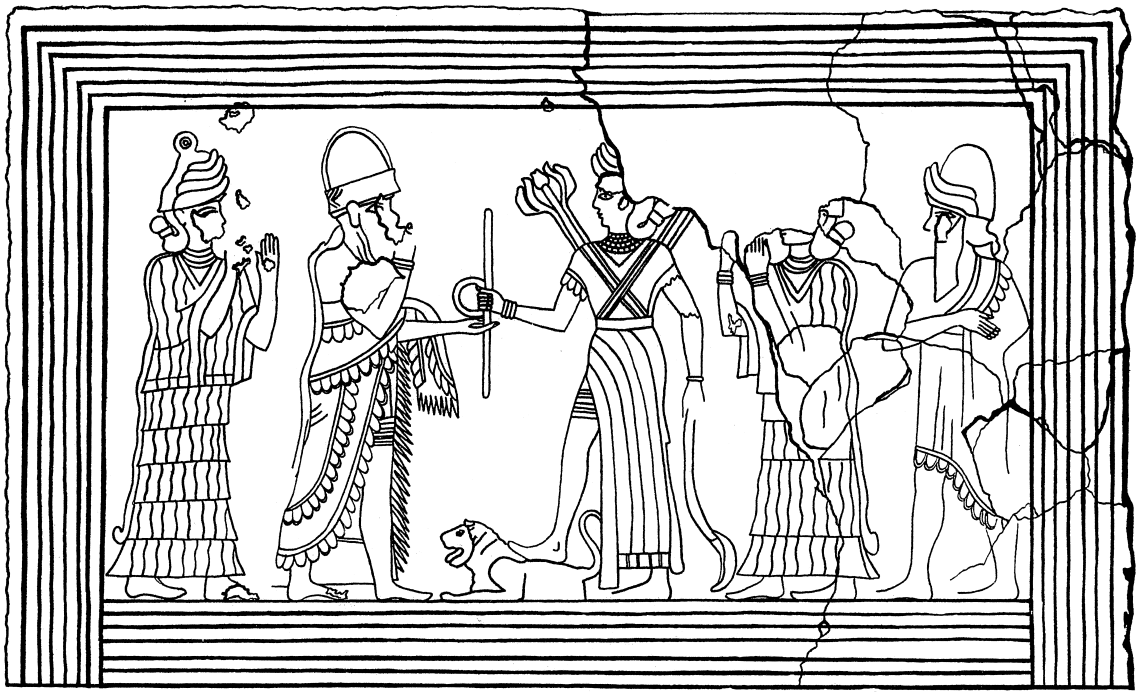


Fig. 2 "Investure of Zimri-lim." Margueron 2004: 478 Fig. 459.

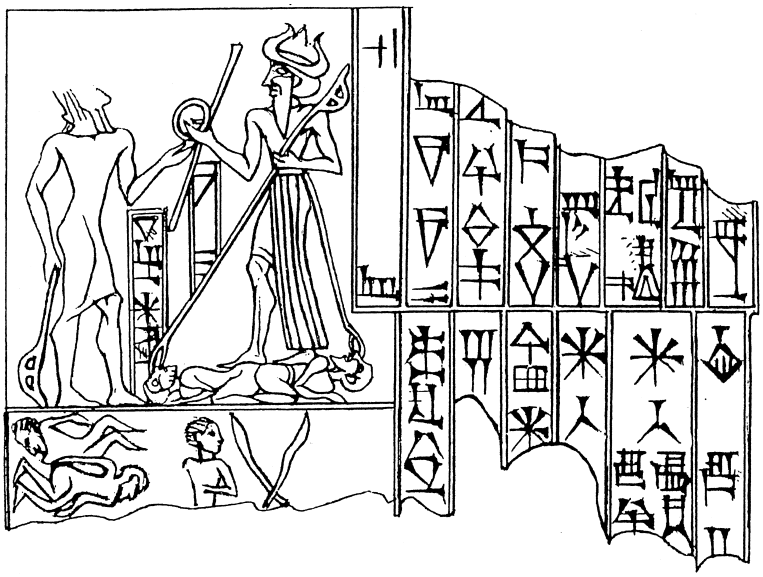


Fig. 3 Seal Impression of Šu-iliia (Ešnunna). OIP 43: 215 Fig. 100A.

pair of measuring implements was transformed into the symbol of political sovereignty in the course of two or three hundred years. A difficulty arises as regards this explanation, however, because a cylinder seal of Lugal-engardu, the administrator who managed the temple of Inanna at Nippur only fifty years after Ur-Namma, has the same type of "rod and ring" drawing as found on the Hammurabi Law Code Stela (Fig. 5).

Most recently, Kathryn Slanski offered a new interpretation that connects the Ur-Namma Stela to the later works (Slanski 2007). Slanski interpreted that the "rod and ring" of Hammurabi is a representation of "justice" (nig_2-si-sa_2 in Sumerian which, according to her, means "what is made straight"). "Justice" is connoted by an act of stretching a measuring rope straight. She also noticed

Fig. 4 Ur-Namma Stela, Register II (a part) of the "Good Face." Moortgat 1969: Pl. 201.

that the "rod" of the Hammurabi Law Code Stela is tapered at its lower end, as if it is a peg (like the "wedge and ring" in the OB cylinder seal impressions). Therefore, she thought that the "rod" might actually be a peg meant to be driven into the earth to facilitate the tying of a measuring rope.

3. "Rod, ring, and rope" on the Stela of Ur-Namma (2)

Several art historians and Assyriologists have doubted the measuring implements theory (e.g., van Buren 1949; Canby 2006[2]: 9[66]).

William W. Hallo also assumed that the rope held by the god Nanna was looped down with

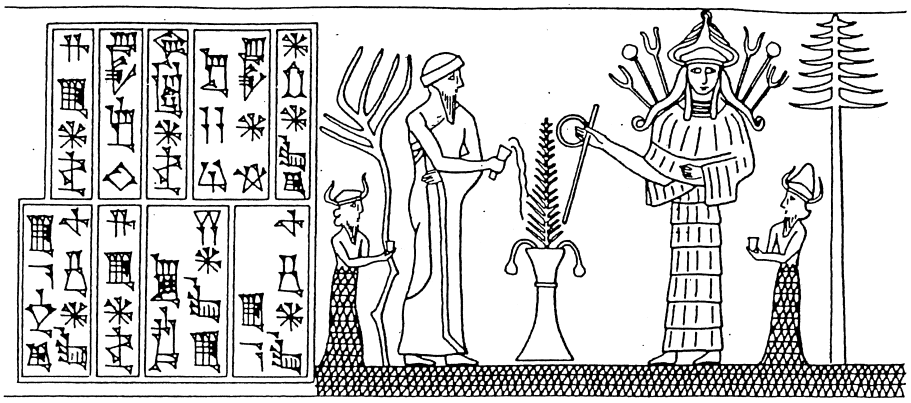


Fig. 5 Seal impression of Lugal-engardu. Zettler 1987: 60.

its one end, but he thought the rope in question as a "nose-rope" (called eškiri in Sumerian, and *ṣerretu* in Akkadian). He also claimed that another term šibir$_{(2)}$, often found side by side with eškiri, refers to the "rod," and that the term was originally a designation of the shepherd's staff. According to him, the "rod and rope" (called šibir$_2$ eškiri in Sumerian) was a symbol of the prerogative of rule which a god entrusts to a king. This king ruled over people just like a pastoralist controlling a herd of cattle or a flock of sheep and goats (Hallo 2005: 150–151).

As far as I know, Michael Roaf is the only one scholar who explicitly mentioned that Nanna holds three items in this image, not two: "The god holds the rod and ring, perhaps originally a yardstick and a measuring rope: the other object may be a necklace" (Roaf 1990: 75). I, too, believe that Nanna holds a set of three objects; i.e., a pole, a wooden ring, and five strands of rope (not a pole and a ring, as assumed by many scholars, nor a rod, pole and a necklace as claimed by M. Roaf). If we look at the Ur-Namma Stela closely, we find that the "ring" is actually made of wood, not rope, and that five short strands of rope are looped down below the ring. Furthermore, when carrying a coil of rope, a man usually grasps the upper part of the coil with his hand, or else he holds it to his chest. (This is exemplified on the fragments of the Gudea stela, almost contempotary to the Ur-Namma stela [Suter 2000: 183–184; Appendix B ST. 10, 18, 48].) If a man grasped a "coil of rope" sideways as depicted in the Ur-Namma Stela, he could hardly maintain the circular shape of the coil (even though the coil was tied with several short thongs).

4. Sar-i Pul-i Zohab II relief and the Rosen mould

Sar-i Pul-i Zohab II, one of several reliefs that are inscribed on the rocks in the Iranian region of the upper reaches of the Diyala river, seems to be dated to the early Isin-Larsa period (Fig. 6). [The representation of the relief was apparently inspired by the Akkadian art.] The relief depicts Ištar standing in front of the local ruler. Ištar pulls with her left hand the rope whose branches reach the noses of the two enemy leaders. An important point here is that Ištar is offering a large ring to the ruler with her extended right hand. I interpret that both this large ring and the nose-rope respectively correspond to the "ring" and the "rope" of the Stela of Ur-Namma.

A limestone mould, that is now housed in the Rosen Collection (hereafter called "Rosen mould"), depicts both Ištar and a deified king sitting on the chairs of an elevated throne. According to Hansen, who recently published an article on the the Rosen mould, the king is Naram-Sin, the fourth king of Akkade who was the first king in history to be deified (Hansen 2002). Ištar pulls one large rope that diverges into four small ones. Two of the small ropes are bound to the noses of the two local rulers, while the other two are bound to the noses of the two deities. Naram-Sin holds a large ring in his left hand, while Ištar grasps his wrist with her right hand. We might interpret that Ištar is ordering Naram-Sin to tie the nose-rope to the large ring. Hansen interpreted the nose-rope, which

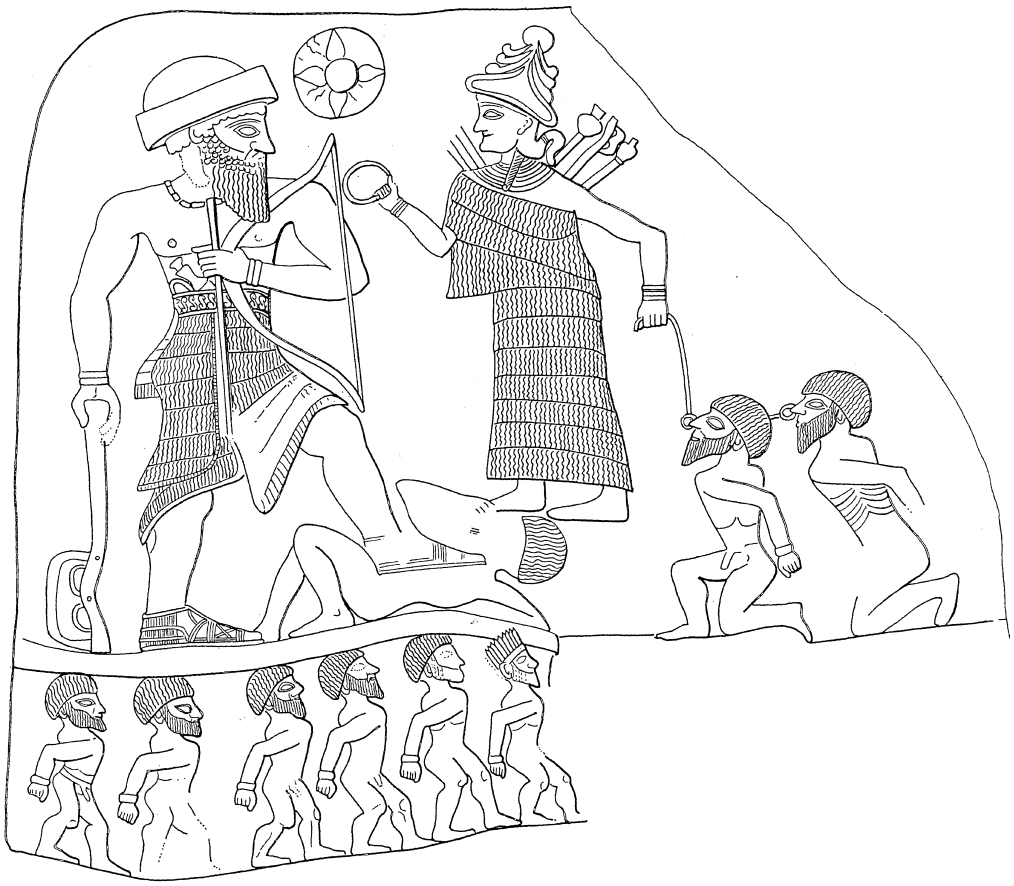


Fig. 6 Sar-i Pul-i Zahab II Relief (Anubanini I). Postgate-Roaf 1997: 151 Fig. 7.

is stretched out behind the goddess, as being already bound to the ring held by the king. I do not agree with him, as the nose-rope would rather be linked to the ring in front of the goddess, not behind her back. Another interpretation is that Ištar is making an symbolical act of grasping the king's wrist, which can stand for the actual binding of her nose-rope to the large ring.[1]

Fig. 7a A nose-rope with a large ring. OIP 47 [Eisen 1940]: Pl. XVII 191.

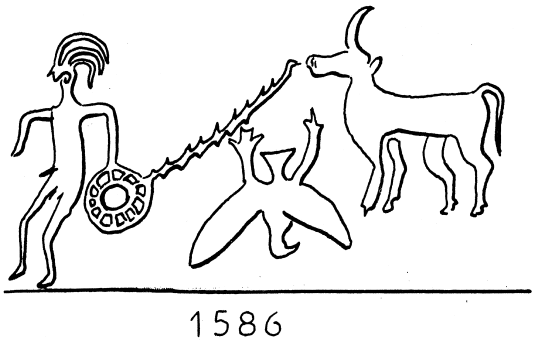


Fig. 7b Amiet 1980: Pl. 110 (Epoque proto-urbaine, le maître des animaux), no.1586.

1 I know well that serious doubts have been raised against the authenticy of the Rosen mould (e.g., Braun-Holzinger 2007: 93–94[59]). I still hesitate to throw away the mould as a fake, for its representation of a large ring and a nose-rope is perfectly in accord with my conclusion to be offered here. Even if the mould will eventually be judged to be a modern forgery, it does not give a serious influence on my suggestion that the "ring" (within the "rod and ring") was originally a wooden device for connecting the nose-rope to the peg.

I assert that both the ring and the nose-rope on the Rosen mould are the same kind of ring and nose-rope as drawn on the Iranian rock relief, and that they again correspond to the "ring and rope" of the Ur-Namma Stela. Furthermore, I am inclined to conclude that the large ring in question is a tool for passing over a post, not a nose-ring. It is the same kind of ring used by the pastoralists to bind the lead-ropes to a post. G.A. Eisen long ago published a cylinder seal impression that pictures this type of ring (OIP 47 no. 191) (Fig. 7). "A man wearing a feather headdress leads a bull by means of a stout twisted rope with rings attached to its ends. The smaller ring passes through the bull's nose, while the larger ring, which the man holds, was perhaps used for passing over a post" (Eisen 1940 [OIP 47]: 66–67).

5. "From "rod, ring, and rope" (Ur-Namma) to "rod and ring" (Hammurabi)

The "rod" is coupled with the "ring" in the Ur-Namma composition, while the "rod" does not appear in the two representations that show the scene of Ištar and the king (Sar-i Pul-i Zohab II and the Rosen mould).

The Ešnunna cylinder seal (Fig. 3) seems to show the intermediate stage between the two aforementioned compositions and the Ur-Namma Stela. While the Ešnunna seal is rather similar to the Iranian rock relief in its style of composition, the same kind of objects found in the Ur-Namma Stela appear in the Ešnunna seal also. On the Ešnunna seal, the god Tišpak holds a "rod and ring" in his right hand, and a nose-rope and a weapon in his left. On the Ur-Namma Stela, Nanna grasps the "rod, ring, and rope" in his right hand, and a battle-ax in his left.

In my interpretation, the "rod" appeared on these artistic representations when a rite was established in which a god entrusted the "ring" and the "rope" to a king as tools of detaining an enemy king. The first rite was probably performed during the reign of Ur-Namma. The "rod," however, remained complementary to the "ring" and "rope" in the rite.

Soon after the establishment of the rite of the "rod, ring, and rope," the "rope" disappeared from the southern Mesopotamian compositions, most likely because the "ring" solely represented a set of tools of ruling over foreign people.

I agree with Hallo in that the term "rod and ring" was designated as šibir_2 eškiri in Sumerian, but I do not believe that the "rod" ($\text{šibir}_{(2)}$) was originally a shepherd's staff or crook. We do not find any concrete descriptions that the shepherd pastured his flock with a stick called $\text{šibir}_{(2)}$.

II. Šibir_2 (EN×KAR_2: "cult symbol III," "rod") and $\text{eš}_2\text{-kiri}_4$, eškiri ($\text{U.EN×KAR}_2$: "nose-rope," "ring") in textual sources

1. EN×KAR_2 and U.EN×KAR_2 in second millennium textual sources

The two signs EN×KAR_2 and U.EN×KAR_2 are used to express "rod" and "ring" in cuneiform texts of the second and first millennia BC, and they are read šibir and eškiri. Since the signs are so similar to each other, ancient scribes sometimes confused the proper signs for writing šibir and eškiri, and confusions and misunderstandings are also found in modern Assyriological literature. Yet, despite the confusions sometimes found in texts, I believe that a general rule was established for the usage of these two terms in the early second millennium BC. In my assertion, the established rule was that EN×KAR_2 and U.EN×KAR_2 were read as šibir_2 and eškiri respectively.

1. Assyriologists often fail to give a correct reading šibir_2 to EN×KAR_2, erroneously interpreting it as enkar(a) or bur(u)_{14}. The other sign U.EN×KAR_2 is prevailingly read šibir, but it actually stands for eškiri in many cases.

2. The sign U.EN×KAR_2 found in Old Babylonian literary texts should be read eškiri, and it

refers to the "ring" as a symbol of foreign rule, rather than the "nose-rope."[2] The older form $eš_2$-$kiri_4$ ("rope of the nose") is still used in contemporary royal inscriptions.

3. The sign U.EN×KAR_2 is likely to have been artificially invented in the Ur III period, though U.EN×KAR_2 is not as yet found in any Ur III sources. This new sign has an additional element U to EN×KAR_2. It had two phonetic values, /bur(u)/ and /eškiri/. The element U(=$BUR(U)_3$) works as a kind of phonetic indicator.

4. The new sign U.EN×KAR_2, with a reading eškiri, was used to denote the "ring" in the "rod and ring (and rope)," so that people might see the "ring" as inseparable from the "rod" (EN×KAR_2). We notice that the element U(=$BUR(U)_3$) within the sign has the meaning "circle."

5. In principle, the sign for šibir is EN×KAR_2 (= $šibir_2$). Although U.EN×KAR_2 sometimes occurs in cuneiform texts for expressing šibir, this must be a secondary development.

6. A reading $en\text{-}kar_2$ for EN×KAR_2 is extremely doubtful. In many cases, it should actually be intertpreted to be $šibir_2$.

Fig. 8 A captive tied with a nose-rope. Parrot 1960: 190 Fig. 229.

2 Recent Assyriological commentaries on the terms $šibir_{(2)}$ and eškiri are based on van Dijk's study of Abi-Ešuh A line 7. The line in question was interpreted by van Dijk as follows: **Abi-Ešuh A 7)** a_2-ag_2-ga-gal-mah-an-ki-bi-da-ke_4 sag-ke[$š_3$-d]a-bi [ma]-ra-an-si_3 / **sibir**-kur-kur-ra $guru_x$(GURUN)-ma šu he_2-em-m[i-l]a_2-[a]m_3 "Il t'a donné la surveillance sur ordres suprêmes (qui regissent) le ciel et la terre, le **bâton** qui courbe les pays hostiles, il t'a mis dans les mains" (van Dijk 1966: 66–67). I differently interpret the latter part of the line: eškiri kur-kur-ra $gurum_2$-ma šu he_2-em-mi-la_2-am_3 "he has bound(?) to (your) hand the "ring and nose-rope" which makes the foreign lands bow down."

7. The term šibir$_2$ (EN×KAR$_2$) originally referred to the pole which Szarzyńska called "cult symbol III" or "column symbol III." The term acquired a new meaning of "rod" (in the "rod and ring (and a rope)") during the Ur III period, it could still appear in its original meaning in the Old Babylonian literary texts. In my opinion, it has nothing to do with the shepherd's staff or crook.

2. "Nose-rope" (es$_2$-kiri$_4$ / *ṣerretu*) in third millennium texts

The Akkadian expression "nose-rope of the people" is found in the royal inscriptions of Naram-Sin and Šulgi. Both texts describe the fact that the god Enlil entrusted the nose-rope to the king (Ex. 1, 2).

A nose-rope for pulling cattle and donkeys is depicted in early third millennium art. However, it was not until the Akkade or Ur III period that war-captives were detained with nose-ropes, as is demonstrated by a relief fragment (Fig. 8). It is not accidental that the "nose-rope of the people" first occurs in the inscription of Naram-Sin, as he conquered various peoples of different ethnicities.

The expression "to tether a person to a nose-rose" is used in Ur III texts in the connotation of "to subjugate and detain a person," as exemplified in a letter-order (Ex. 3). Here, the term for "nose-rope" is eš$_2$-kiri$_4$ (not eškiri$_4$). The term eš$_2$-kiri$_4$ is also found in an Ur III administrative record (Oppenheim AOS 32 pl. 14 E 19 [= Sauren PIOL 19 393]). In Ebla documents dated to the 24 century BC, the term is written KA.ŠE$_3$ (read as eškiri$_x$ by Italian scholars).

Ex. 1. Naram-Sin 3 (Frayne RIME 2: 97–98)

rev. iv 37) *i*$_3$-*nu*, **38)** ^{d}*en-lil*$_2$, **39)** DI.KU$_6$-*šu*$_2$, **40)** *i-di*$_3$-*nu-ma*, **41)** *u*$_3$, **v 1)** ***ṣe*$_2$-*ra-at*, 2) NI.SI$_{11}$, 3)** *qa*$_2$-*ti-is*$_2$-*su*, **4)** *i*$_3$-*di*$_3$-*nu*, **5)** *u*$_3$, **6)** *na-e*, **7)** *e-e-er-tim*, **8)** *la i-di*$_3$-*nu-šum*$_6$ / **iv 37–40)** when the god Enlil determined (this) verdict (for) him (= Narām-Sîn), **41–v 4)** he entrusted the **lead-rope of the people** into his hands, **5–8)** and gave him no superior, (v 9-15: [*he set up* before] the god Enlil a kurkurru vessel [for oil] and dedicated (it to him)).

Ex. 2. Šulgi 25 (Frayne RIME 3/2: 133–134)

i′ 9) [*i*$_3$-*nu* ^{d}]en-lil$_2$, **10) [*ṣe*$_2$-*r*]*a-at*, 11) [NI].^{ši}SI$_{11}$, 12)** [*qa*$_2$-*ti-i*]*s-su*, **13)** [*i-d*]*i*$_3^{di}$-*nu*, / **i′ 9–13)** [when the god] Enlil entr[usted] [in]to his [hands] the **[nose-r]ope of the [peo]ple**,

Ex. 3: TCS 1 158 (Ur III letter-order)

1) na-ba-sa$_6$, **2)** u$_3$-na-a-du$_{11}$, **3)** geme$_2$ lu$_2$-^{d}dumu-zi-ke$_4$ in-tuk-a, **4) [e]š$_2$-kiri$_4$-še$_3$, rev. 5)** na-ba-**du$_3$, 6)** geme$_2$ du$_{11}$-ga-ni-zi-kam. / **Maekawa:** Say to Nabasa, "The slave woman to whom Lu-Dumuzi has been married should not be under control (lit.: **"not to be put to the nose-rope"**), because she is a slave woman of Duganizi.

3. eš$_2$-kiri$_4$ / *ṣerretu* in second millennium royal inscriptions

The term eš$_2$-kiri$_4$ occurs in two royal inscriptions of Hammurabi (Ex. 4). This term is preferred to eškiri (U.EN×KAR$_2$) as "nose-rope" in a royal inscription that dated in the late second millennium BC (Ex. 5). The Akkadian expression for the "nose-rope" is also found in the inscriptions of Hammurabi and Samsu-iluna (Ex. 6). The "nose-rope" was entrusted to Hammurabi by different gods (Enlil, Utu/Šamaš, Inanna). Since the "rod" (šibir$_2$; Akk. *šibirru*) is not mentioned in any Old Babylonian royal inscriptions, I conclude that the "rod" was complementary to, and less important than the "ring."

Ex. 4. Hammurabi 14 (RIME 4: 351)

Sum. 17) u$_4$ ^{d}utu, **18)** ki-en-gi ki-uri, **19)** nam-en-bi ak-de$_3$, **20)** mu-na-an-sum-ma-ta, **21) eš$_2$-kiri$_4$-**bi, **22)** šu-ni-še$_3$, **23)** bi$_2$-in-si-a

Sum. 17–23) when the god Utu gave to him the land of Sumer and Akkad to rule (and) entrusted their **nose-rope** in his hands,

Ex. 5. Adad-apla-iddina 1001 (Frame RIMB 2: 63)
ii 1) eš$_2$-kiri$_4$ un-šar$_2$-ra, **2)** šu-ga$_2$ al-dab-be$_2$-da, **3)** me-en-ga$_2$ u$_4$-bi-a
ii 1–3a) I am the one who takes in his (lit. "my") hand the lead rope of all the people.

Ex. 6. Hammurabi 3 (RIME 4: 337)
15) [*i*$_3$-*n*]*u* ^{d}*en-lil*$_2$ UN.MEŠ KUR-*u*$_2$, **16)** a-*na be-lu-ti e-pe-ši*, **17)** *id-di-na* ***ṣer-re-es-sa***, **18)** *a-na* ŠU-*ia*, **19)** *u*$_2$-*ma-al-li*
15–19) when the god Enlil gave to me to rule the people of the land, (and) entrusted their **lead-rope** into my hands,

4. eškiri (EN×KAR$_2$) in second millennium literary texts

As an example of the confusion that Assyriologists experience in the reading and interpretation of EN×KAR$_2$ and U.EN×KAR$_2$, I quote one of the royal hymns of Ur-Namma.

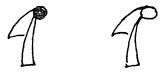
symb. no	typical signform	no in ATU	identification
I	 (*)	208/9	MUŠ$_3$
II	 (*)	+ 210/11	?
III		+ 248	URI$_3$ in Uruk IV
IV		+ 249-252	?
V	 (*)	244/5	ŠEŠ in Uruk IV URI$_3$ since Uruk III
VI	 (*)	246	ŠEŠ
VII		236	NUN

Fig. 9a Archaic signs for "cult symbols." Szarzyńska 1989: 4 Table 1.

Ex. 7. Ur-Namma D, Ur Version (Tinney 1999: 38)

19) aga me-lam$_2$ me-teš$_2$ nam-lugal-la sag-ga$_2$ im-mi-gal$_2$, **20)** ^{giš}gidru ku$_3$ un šar$_2$ si-si-e-sa$_2$ šu-ga$_2$ im-mi-in-sa$_2$, **21) enkara(EN×KAR$_2$) šibir(U.EN×KAR$_2$) eš-kiri$_3$** zi-gal$_2$ lah$_6$-lah$_6$-e šu-mu-uš im-ma-an-šum$_2$[?] / **19)** He (= Enlil) placed the splendid crown befitting kingship on my head, **20)** He arranged the sacred staff for organizing the teeming people in my hand, **21)** He handed over to me the **rod, ring and nose-rope** to lead the living.

Maekawa

21) šibir$_2$(EN×KAR$_2$) eškiri(U.EN×KAR$_2$)$^{eš\text{-}kiri4}$ zi-gal$_2$ lah$_6$-lah$_6$-e šu-mu-uš im-ma-an-šum$_2$[?]/ **21)** He handed over to me the **"rod and ring"** to lead the living.

5. šibir (EN×KAR$_2$) ["cult symbol III," "column symbol III"] in second millennium literary texts

In her study of the Uruk archaic texts, Krystyna Szarzyńska classified the various pictographic signs, that symbolize the long poles topped with various objects, into seven types. These poles were carried by men for cultic purposes ("cult symbols"), and they stood in pair at the gate of a temple or at its cattle pen ("column symbols") (Szarzyńska 1989) (Fig. 9a, b).

Soon after the publication of Szarzyńska's work, Agnès Spycket organized the "rod and ring" compositions into two different groups (Spycket 2000). One is a set of representations of a pole

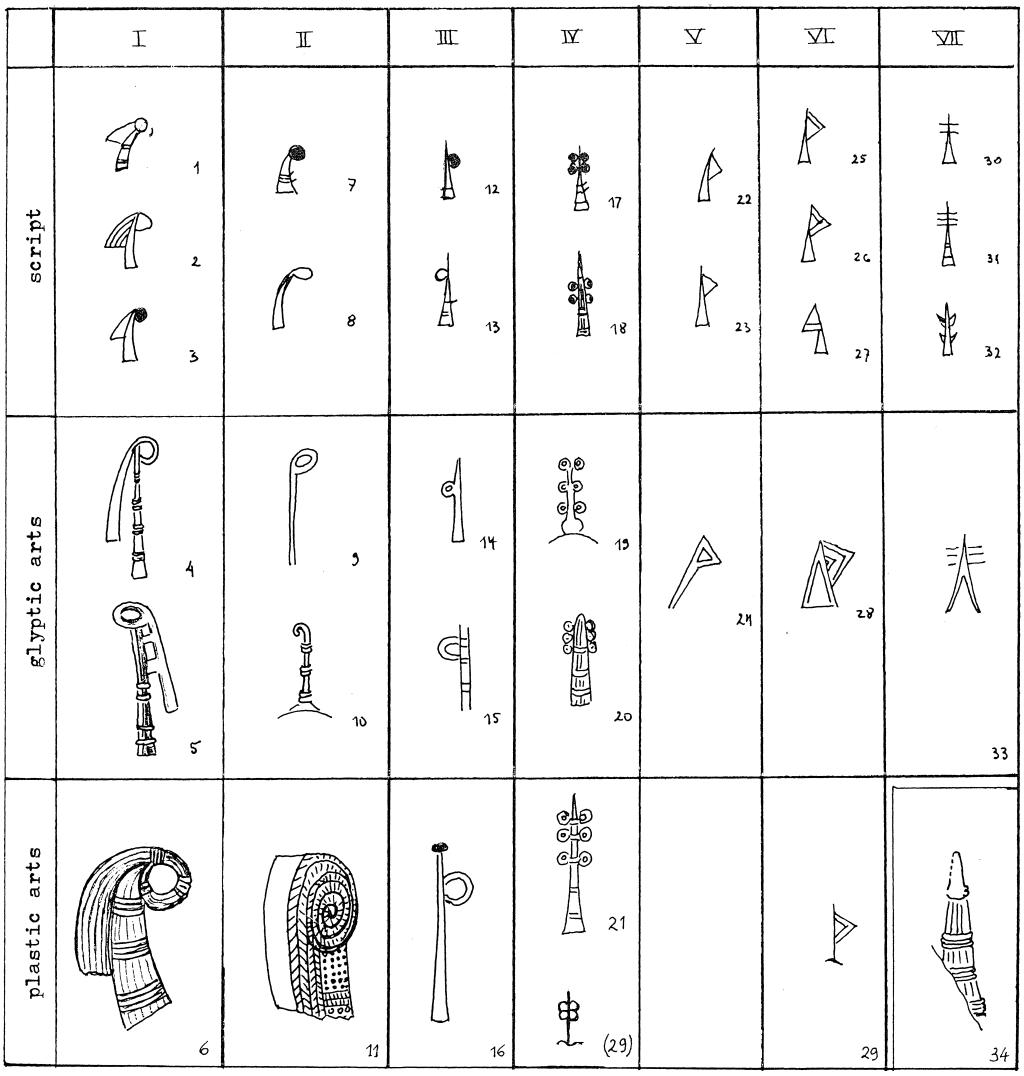


Fig. 9b Forms of "column symbols." Szarzyńska 1989: 5 Table 2.

and a complete circle, to which belongs the "rod and ring" of Hammurabi. This type of "rod and ring," according to her, may be designated as *haṭṭu* and *kippatu* in Akkadian texts as asserted many years ago by Thureau-Dangin. The other group is composed of the representations of a "rod" with a "ring" of an incomplete round shape (D-shaped). The D-shaped "ring" is depicted as firmly attached to the pole. Spycket asserted that the origin of the second type "rod and ring" is the "cult symbol III" or the "column symbol III," as classified by Szarzyńska.

The "cult symbol III" artifact, dated to the middle third millennium BC, was unearthed from Tello (Fig. 10). It is a pole of 3.27 *meters* in length with a D-shaped attachment, and is made of wood and covered with copper. We also see that a pair of two poles with D-shaped "rings" ("column symbol III") stood near the entrance of a temple or cattle pen (Hall-Woolley 1927 [UE I]: 93; Pl. XXXI 1–3 (Fig. 11).

I agree with Spycket in that the "cult symbol III" (= "column symbol III") was the origin of the second type "rod and ring." I further conclude that it is referred to by the term $šibir_2$ ($EN×KAR_2$) in documents.[3]

An Ur III administrative record (UET 3 826) mentions various attachments and products related to a door that was 2.13 *meters* long. Among those, we find two wooden $šibir_2$-poles with tapered ends (or wooden pegs for the $šibir_2$-poles) (obv. 12: ^{giš}gag-$šibir_2(EN×KAR_2)$). The Old Babylonian lexical list mentions the same term in a group of different words for poles (line 324).

Ex. 8. UET 3 826 (Ur III administrative record)
obv. i 1–3) 1 ^{giš}ig lu-ur-num$_2$ gid$_2$ 4 1/3 kuš$_3$ la$_2$-2 šu-si dagal 1 2/3 kuš$_3$ bar-da u$_3$-bi 6, **4–6)** 1 ^{giš}ig lu-ur-num$_2$ gid$_2$ 4 1/3 kuš$_3$ la$_2$-2 šu-si dagal 2/3 kuš$_3$ la$_2$-2 šu-si bar-da u$_3$-bi 6, **7–8)** 92 gag gur$_4$-ra ab-ba zabar-bi, ki-la$_2$-bi 1 1/2 ma-na 1 gin$_2$, **9–10)** 2 ^{uruda}dur$_2$ ^{giš}ig-bi, ki-la$_2$-bi 2 ma-na 7 gin$_2$, **11)** 2 giš.nu-kuš$_2$ da-bi, **12)** 2 **^{giš}gag-šibir$_2$(EN×KAR$_2$)** mes-bi, **13)** 1 ^{giš}sag-kul$_2$ šu-si-sa$_2$ ša$_3$-kal-si$_3$-ga e$_2$-ba-an-bi, …

Line 15–16 of a royal inscription of King Šū-ilīšu (Šū-ilīšu 2) demonstrates that the pole designated as $šibir_2$ ($EN×KAR_2$) is closely related to the "emblem" (šu-nir). Frayne read $EN×KAR_2$ as buru$_{14}$ ("harvest") and made the translation "a great divine standard, a tree fit for a (rich) harvest," but this does not make

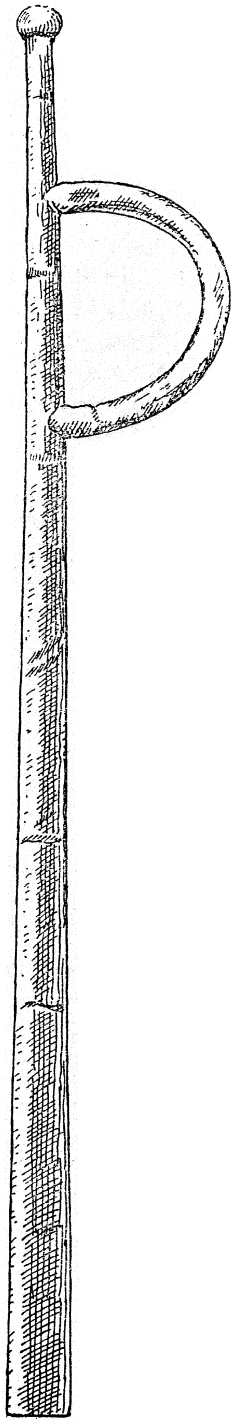


Fig. 10 "Column symbol III" from ED III Tello. Parrot 1949: 109 Fig. 26c ("poteau ansé).

3 In my opinion, giš.$EN×KAR_2$ found in Šulgi O 12 is a typical example of the reading $^{giš}šibir_2$, in spite that it has been interpreted as ^{giš}enkara (Klein 1976: 274–275) or even ^{giš}ešgiri$_2$ (ETCSL 2.4.2.15). The term is used here to describe that Abzu was built high, just like a long pole standing high on earth ("cult symbol III, column symbol III"). **Šulgi O 11)** abzu ki-tuš-ku$_3$ šul-^{d}suen-na, **12) ^{giš}šibir$_2$(EN×KAR$_2$)**-mah an-na sag il$_2$-la u$_6$-di ki us$_2$-sa. A reading enkar(a) for $EN×KAR_2$ is extremely doubtful. The parallelism $EN×KAR_2$ – U.$EN×KAR_2$, often found in second millennium literary texts (e.g. Rim-Sin C), should not be interpreted as a pair of enkar(a) – šibir (as adopted in recent Assyriological literature) but rather as $šibir_2$ – eškiri. While $^{giš}šibir_2$ in Šulgi O 25 denotes the "cult symbol III," $šibir_2$ in the latter texts refers to the "rod" with the "rod and ring."

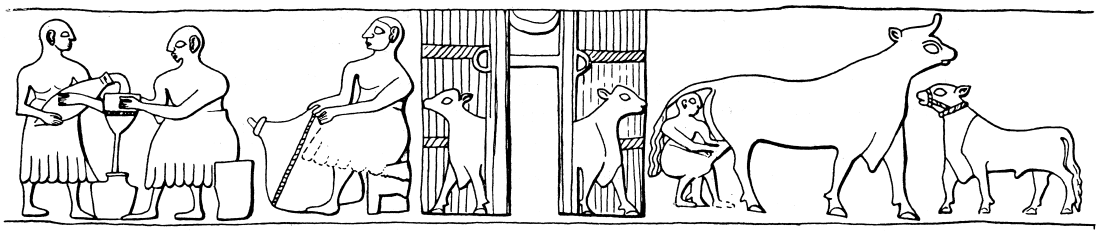


Fig. 11 Cattle-pen in the Al-Ubaid frieze. Delougaz 1968: 198 Fig. 15.

any sense. My interpretation is: ^{d}šu-nir-gal ^{giš}šibir$_2$(EN×KAR$_2$) tum$_4$-a: "the divine emblem, which is fit for the cult symbol III."

Ex. 9. Šū-ilīšu 2 (Frayne RIME 4: 17)

i 1) ^{d}nanna, … **7)** lugal-a-ni-ir, **8)** ^{d}*šu-i*$_3$-*li*$_2$-*šu*, **9)** dingir-kalam-ma-na, …**15)** **^{d}šu-nir-gal, 16) giš buru$_{14}$-a tum$_4$-ma, 17)** u$_6$-di-de$_3$ he$_2$-du$_7$, **18)** ku$_3$-GI, **19)** ku$_3$ za-gin$_3$-na gun$_3$-a, **20)** mi$_2$-ul-la$_2$ sig$_7$-[ga], **21)** alam ku$_3$-[babbar], **22)** x x gi x [x x] (Lacuna), **ii 1)** [u$_4$ …], **2)** m[u- …], **3)** u[ri$_5$.KI(?) …], **4)** x-[…], **5)** za$_3$-a[n-ša-an.KI-na-še$_3$] sag$_2$-d[u$_{11}$-ga], **6)** ki-tuš-ba gi-n[a-a], **7)** mu-na-dim$_2$, **8)** nam-ti-la-ni-še$_3$, **9)** a mu-na-[r]u / **i 1–7)** For the god Nanna, …, his lord, **8–14)** Šu-ilīšu, god of his nation, … **15–22) a great divine standard, a tree fit for a (rich) harvest**, evoking wonder, coloured with gold, silver, and shining lapis-lazuli, … a sil[ver] image … (Lacuna), **ii 1–7)** he fashioned for him [when] he established in Ur the people scattered as far as Anšan, in their abode. **8-9)** He dedicated it for his own life.

6. eškiri (U.EN×KAR$_2$) and šibir$_2$ (EN×KAR$_2$) again

The five terms giš.U.EN×KAR$_2$ šu-du$_7$, giš.EN×KAR$_2$, giš.gag-EN×KAR$_2$, giš.U.EN×KAR$_2$, and giš.gag-U.EN×KAR$_2$ are found in the Old Babylonian lexical list of trees and wooden products (lines 158, 321–324).[4]

My tentative interpretations of these words are as follows:

Ex. 10 (OB list of trees and wooden products)

line	signs	reading	interpretation
158)	giš.EN×KAR$_2$ šu-du$_7$	giš.eškiri šu-du$_7$	a complete set of eškiri implements (i.e. a wooden ring for passing over a pole, a nose-rope and a nose-ring)
321)	giš.EN×KAR$_2$	^{giš}šibir$_2$	cult symbol III?
322)	giš.gag-EN×KAR$_2$	^{giš}gag-šibir$_2$	tapered column symbol III? (or a peg of the column symbol III?)
323)	giš.U.EN×KAR$_2$	giš.eškiri	"rod (and ring)"?
324)	giš.gag-U.EN×KAR$_2$	^{giš}gag-eškiri	tethering peg?

My readings of ENxKAR$_2$ and U.ENxKAR$_2$ are based on the principle that, I believe, was established in the early second millennium BC.

The sign GIŠ ("wood") attached to U.ENxKAR$_2$ (= eškiri) (158, 323) raises a serious challenge

4 I understand that the Old Babylonian (Nippur) Giš List 317–325 is a section for wooden "poles or staffs" (cp. Feldhuis 1997: 85 [321–325: staffs]); **Giš List 317)** giš.an-ti-bal, **318)** giš.zi-in-hur, **319)** giš.gag, **320)** giš.ir, **321)** giš.EN×KAR$_2$, **322)** giš.gag-EN×KAR$_2$, **323)** giš.U.EN×KAR$_2$, **324)** giš.gag-U.EN×KAR$_2$, **325)** giš.kab-bar. Note that the preceding lines 312–316, which are the last part of the "boats section" (lines 261–316), seem to be a collection of the words for long attachments of ships.

to the traditional interpretation of eškiri as "nose-rope." I have already concluded that eškiri often appears as a term for a set of implements used to detain war-captives (that is, a large wooden ring for passing over a pole, a nose-rope, and a small nose-ring), and this holds good here. I understand that the term šu-du$_7$ (lit.: [to be] "complete") which follows giš.eškiri in line 158 is an explanation for this.

The term ^{giš}gag-šibir$_2$(EN×KAR$_2$) is found in an Ur III administrative record also (Ex. 8: UET 3 826). Since a pair of these objects are mentioned as one of the attachments of a door, it is fairly safe to interpret the term as "column symbol III," as defined by Szarzyńska. The element gag, which literally means "peg," probably suggests that this wooden pole is sharpened, to be driven into the ground.

The two terms giš.eškiri and ^{giš}gag-eškiri (324–325) still remain difficult. An interpretation of the former as "rod" is preferred to "ring," because the line in question belongs to a section of different designations of wooden poles. The latter might denote a wooden peg through which the large ring affixed to the nose-rope is passed.

Slanski offered the hypothesis that the "rod" was actually a peg driven into the earth, to which the measuring rope is connected. I am inclined to interpret that giš.gag-eškiri might denote a peg for a nose-rope.

The term šibir$_2$ can be used in two different meanings in Old Babylonian texts; it can mean "cult symbol III" or "column symbol III," or it can stand for "rod" of the "rod and ring." The lexical list of wooden objects quoted above seems to substantiate the first usage, while the second usage is found the Old Babylonian descriptions of the royal insignias (e.g., Ex. 7 = Ur-Namma D). The second usage was artificially devised in the Ur III period for the denotation of the "rod" in the newly-established "rod and ring" ritual.

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Postscript

1. In this article, I have regrettably failed to quote F.A.M. Wiggermann, "Ring und Stab (Ring and rod)" (*Reallexikon der Assyriologie* 11 5/6 [2007]), 414–421. I read it after submitting the draught of this article to the editor.

2. I now think that the reading of the sign U.EN×KAR_2 still remains undetermined, when it occurs independently in the OB royal and divine hymns (as is exemplified by Abi-Ešuh A [quoted in note 2 of this article]). In this paper which I read at the symposium in November 21–23, 2009, I only thought about a reading of U.EN×KAR_2 as eškiri, erroneously excluding another possible reading of šibir. The sign U.EN×KAR_2, when mentioned alone, might refer to a complete set of "rod and ring." (February 10, 2010)

NOMADS AND FARMERS IN THE ORBIT OF THE MARI KINGDOM IN THE 18TH CENTURY (B. C. E.) SYRIA
A FEW OBSERVATIONS ON *MERḪÛM*-OFFICIALS AND THEIR ROLES

Ichiro NAKATA*

1. The Duality of the Mari Kingship under the Lim-dynasty

One characteristic which distinguishes the Mari Kingdom under the so-called Lim-dynasty from its rival kingdoms in Mesopotamia such as Babylon, Larsa and Eshnunna is the duality of its kingship. This duality is reflected in the royal titles of Yaḫdun-Lim, namely "King of Mari(, Tuttul) and the Land of Ḫana"[1] and that of Zimri-Lim, a grandson (or possibly a nephew?)[2] of Yaḫdun-Lim namely "King of Mari and the Land of Ḫana",[3] as is pointed out by D. Charpin and N. Ziegler.[4]

The first part of the royal title is understood to mean the kingship over the Banks of the Euphrates River (*Aḫ-Purattim*) roughly between Tuttul[5] and Mari. This understanding is supported, for example, by a royal epithet, "one who controls the Banks of the Euphrates River" in an inscription[6] of Yaḫdun-Lim. In another royal inscription of his, he is said to have "controlled the Banks of the Euphrates River" after the victory over the rebellions of three Yaminite chiefdoms on the Banks of the Euphrates River, and the city of Ḫaman yet to be identified.[7] In the case of Zimri-Lim, he calls himself in one of his three seal inscriptions "one who controls the Banks of the Euphrates River".[8]

A key to understand the second part of the royal titles of Yaḫdun-Lim and Zimri-Lim is provided, among others, by the impressions on two bullae of a seal of one of Yaḫdun-Lim's daughters.[9] Her name is not fully restored, but she says, she is a "daughter of Yaḫdun-Lim, the king of Mari and the land of the sons of Sim'al." Since Yaḫdun-Lim himself says in his two extant inscriptions that he is "King of Mari(, Tuttul) and the Land of Ḫana", we may be allowed to surmise that "Ḫana" and "the sons of Sim'al" are more or less synonymous. To be more specific, "the sons of Sim'al" or the Sim'alites here should be considered as a part of the Sim'alites who practiced transhumance chiefly in the Upper Jazirah, as elucidated by D. Charpin and J.-M. Durand.[10] The other part of

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1 LUGAL *ma-ri*^{ki} (, *tu-ut-tu-ul*^{ki}) u_3 *ma-at ḫa-na* (Douglas R. Frayne, *Old Babylonian Period* (*2003–1595 BC*), R.I.M.E. 4, 1990, E.4.6.8.1:3-5 [with Tuttul] and E.4.6.8.2[without Tuttul]).

2 Regarding Zimri-Lim's relationship with Yaḫdun-Lim see D. Charpin et N. Ziegler, *Mari et le Proche-Orient à l'époque amorrite. Essai d'histoire politique,* FM V, 2003, p. 44–45 and175, n. 37.

3 LUGAL *ma-ri*^{ki} u_3 *ma*(-*a*)-*at ḫa-na* (Douglas R. Frayne, R.I.M.E. 4, Toronto, 1990, E.4.6.12.4; E.4.6.12.5; E.4.6.12.6. In a building inscription of Zimri-Lim his title reads, "King of Mari, [Tuttul] and the land of Hana" (R.I.M.E. 4, Toronto, 1990, E.4.6.12.3), but the restoration of [Tuttul] is not certain.

4 D. Charpin et N. Ziegler, FM V, Paris, 2003, p. 37 et 180.

5 J.-M. Durand notes that the direct rule of Mari extended only upto Halabit and did not include Tuttul. See J.-M. Durand, "Peuplement et sociétés à l'époque amorrite: (1) les clans bensim'alites," in Ch. Nicolle (ed.), *Nomades et sédentaires dans le Proche-Orient ancien*, CRRAI XLVI, Amurru 3, Paris, 2004, p. 171.

6 D. R. Frayne, R.I.M.E. 4, E4.6.8.1:7–8.

7 D. R. Frayne, R.I.M.E. 4, E4.6.8.2:98.

8 *ga-mi-ir aḫ* I_7 BURANUN^{ki} (R.I.M.E. 4, E4.5.12.4:4–5).

9 [*n*]*a-gi-ḫa*-[. . .]/ DUMU.MUNUS *ia-aḫ-du-li*-[*im*]/ LUGAL *ma-ri*[^{ki}]/ u_3 *ma-at* DUMU *si-im*-[*a-al*] (Douglas R. Frayne, R.I.M.E. 4, E.4.6.8.6). These bullae were found at Acem Höyük in Turkey.

10 D. Charpin et J.-M. Durand, "<<Fils de Sim'al>>: les origines tribales des rois de Mari," *RA* 80, 1986, p. 141–156; J.-M. Durand, *Documents épistolaires du palais de Mari,* Tome II, LAPO 17, Paris, 1998, p. 418–419.

the Sim'alites were settlers on the Banks of the Euphrates River.

The kingship over the land of the Sim'alite nomads cannot mean a territorial rule of "the land," because there were a number of kingdoms, however small they might have been, in "the land" where they pastured their herds. It only meant the rule over the *persons* of the Sim'alite nomads. The Mari kings managed to control these Sim'alite nomads through the office of the *merḫûm*, Chief of the Pasture.

The purpose of this short presentation is to have some glimpses on the roles the *merḫûm* played among the Sim'alite nomads.[11] I should hasten to add, however, that my presentation will be limited to the textual sources dated to the reign of Zimri-Lim, except on one occasion, because of the paucity of the textual sources from the earlier periods.

2. The Mari Kingship over the Banks of the Euphrates River

Before surveying some pertinent *merḫûm* texts, it may be desirable to make a quick look at Mari's rule over the Banks of the Euphrates River (Map 1). The Banks of the Euphrates River were divided into four districts (*ḫalṣum*s): those of Mari, Terqa, Saggarātum and Qaṭṭunân. There were cities and towns/villages of Yaminites[12] as well as Sim'alites in these districts except in the district of Qaṭṭunân where no Yaminite city or town was found.[13] Each of these districts was controlled by a governor, called *šāpiṭum,*[14] who was appointed from among the high officials of the Mari royal court by the king of Mari, while cities and towns/villages were each under the control of an official, called *sugāgum* who was also appointed by the king of Mari but from among the local dignitaries.[15]

Zimri-Lim exercised his kingship over the Banks of the Euphrates River through these *šāpiṭum*s and *sugāgum*s. It was a responsibility of the governor to keep the king informed about his own district as a whole, while keeping track of residents of a city or a town/village seems to have belonged to the responsibility of the *sugāgum* of the locality.

3. The Mari Kingship over the Sim'alite Nomads

The Sim'alite nomads practiced transhumance mainly in the Upper Jazirah, as I said earlier. This is based on a statement made by Ibāl-El, a Chief of Pasture (*merḫûm*). He says in a letter to Zimri-Lim,[16] "And the pasture land (*nigḫum*) of the (Sim'alite) nomads is Idamaraṣ, just as the land of Yamhad, the land of Qatna and the land of Amurru are pasture land(s)(*nigḫum*) of the Yaminites, and they can be sated with grain and let their herds graze there."[17] Idamaraṣ is an ancient name

11 Just as a part of the Sim'alites practiced transhumance, a part of the Yaminites did the same. Yaminite nomads were often found in the Balikh region, but, according to a letter of Ibāl-El, their pasture land (*nigḫum*) seems to have extended into the territories of the kingdoms of Yamḫad, Qatna and Amurru (A.2730:33-38 in J.-M. Durand, Amurru 3, p. 120–121).

12 See J.-M. Durand, "Peuplement et sociétés à l'époque amorrite: (1) les clans bensim'alites," in Amurru 3, 2004, p.166–169 and Adelina Millet Albà, "La localisation des terroirs Benjaminites du royaume de Mari," Amurru 3, 2004, p. 225–234.

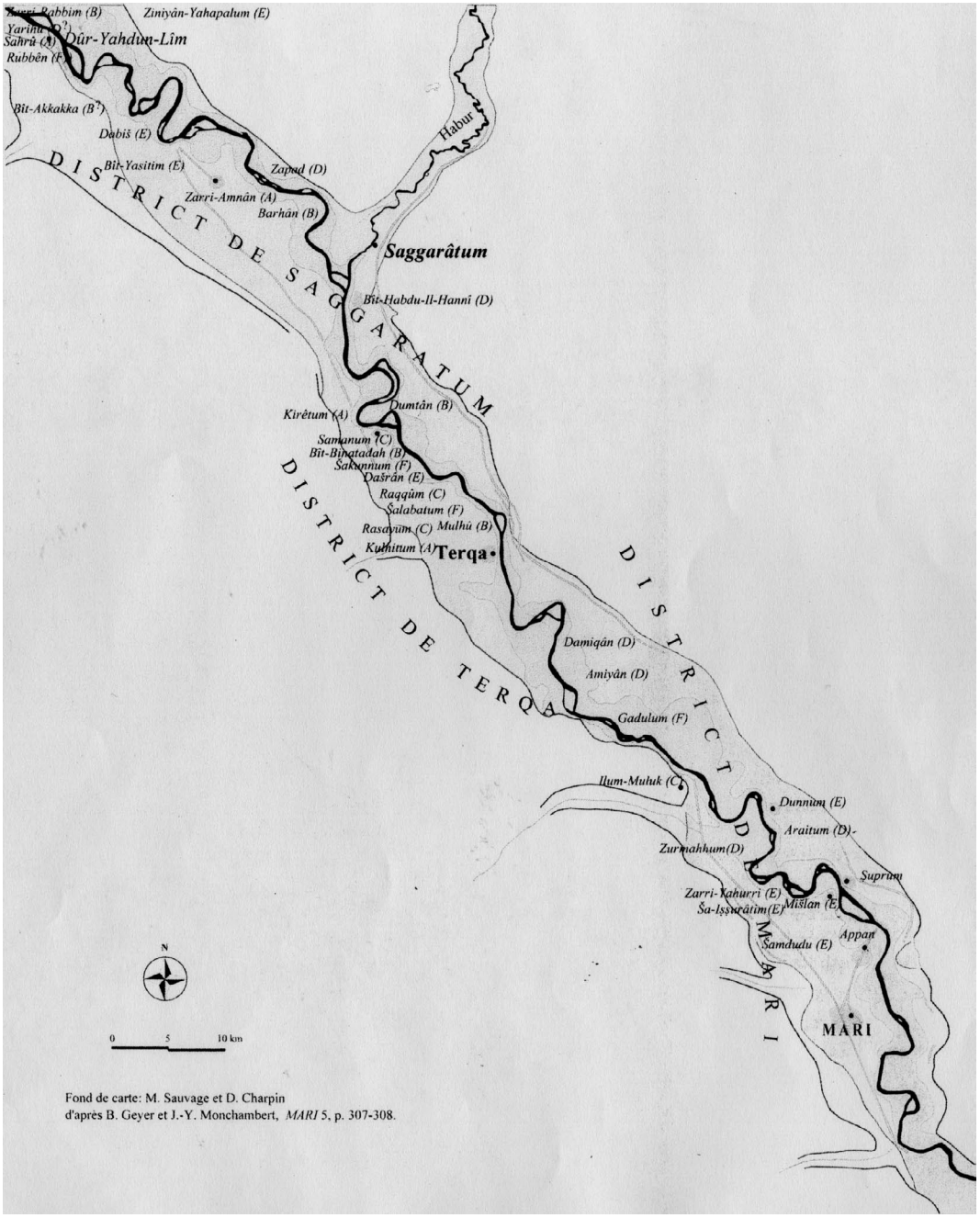
13 B. Lion, "Les gouverneurs provinciaux du royaume de Mari à l'époque de Zimrî-Lîm," Amurru 2, p.152.

14 See B. Lion, Amurru 2, 2001, p. 141–209; J.-M. Durand, LAPO 16, p. 10–11, 157–159 for the provincial administrative system of the Mari kingdom during the reign of Zimri-Lim.

15 An exception may be the appointment of Asqudum to an office of the *sugāgum* in Ḫišamta (ARM XXVI 5:12–21; 6:53–57). As for the system of *sugāgūtum* see J.-R. Kupper, "Les pouvoirs locaux dans le royaume de Mari," in A. Finet (ed.), *Les pouvoirs locaux en Mésopotamie*, Bruxelles, 1982, p. 43–47; Ph. Talon, "La taxe <<sugâgûtum>> à Mari," *RA* 73, 1979; "La 'sugâgûtum' à Mari: une pouvoir local recupéré," in A. Finet (ed.), *Les pouvoirs locaux en Mésopotamie*, Bruxelles, 1982, p. 54–68; "Quelques réflexions sur les clans Hanéens," in J.-M. Durand et J.-R. Kupper (eds.), *Miscellanea Babylonica*, Mélanges offerts à Maurice Birot, Paris, 1985, p. 277–84; "Les nomades et le royaume de Mari," *Akkadica* 48, 1986, p. 1–9; I. Nakata, "A Further Look at the Institution of *sugāgūtum* in Mari," *JANES* 19, 1989, pp. 113–118; Daniel E. Fleming, *Democracy's Ancient Ancestors*, Cambridge, 2004, p. 70–76; L. Marti, *Nomades et sédentaires à Mari: la perception de la taxe*-sugâgûtum, FM 10, Paris, 2008.

16 A.2730:33–38. See now J.-M. Durand, Amurru 3, p. 120–121.

17 A succinct study on the Yaminites, including the Yaminite *merḫûm*-officials, is found in J.-M. Durand, Amurru 3, 2004, p. 158–177.

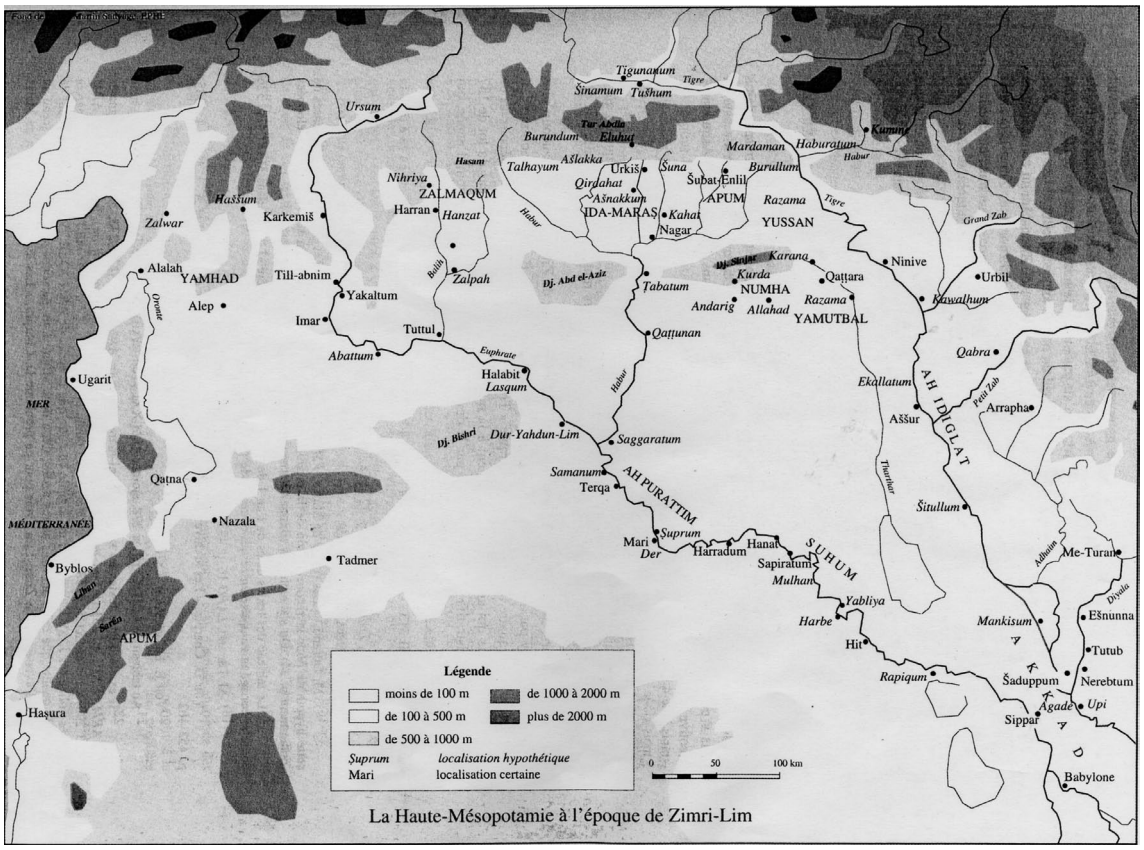


Map 1 Carte des villes benjaminites des clans:
Amnânu (A); Rabbû (B); Uprapû (C); Yarihû (D); Yahrurû (E); non identifié (F).
From A. Millet Albà, "La localisation des terroirs benjaminites du royaume de Mari," in Ch. Nicolle (ed.), *Nomades et sédentaires dans le Proche-Orient ancien*, Amurru 3, Paris, 2004, p. 233.

for the region of the Habur triangle in the Upper Jazirah with an annual precipitation of 300–600 mm where dry farming was and is practiced.[18] In another letter of Ibāl-El written in response to Zimri-Lim's inquiry, he says, "The herds of the pasture (*nawûm*) spread into the interior (?) of the land. The right (east end) of the pasture (*nawûm*) is Mt. Ebiḫ and its left (west end) is Talḫayûm."[19]

18 E. Wirth, *Syrien. Eine Geographische Landeskunde*, Wissenschaftliche Länderkunden, Bd. 4/5, Darmstadt, 1971, p. 92, Karte 3.

19 *na-wu-um*/ [*a-d*]*i li-ib-bi ma-a-tim sà-ap-ḫa-at*/*i-mi-it-ti na-we-e-im* KUR *e-bi-iḫ*/ ù *su-mé-el-ša ta-al-ḫa-yu-um*^{KI}) (A.3901:4'–7' in M. Guichard, "Le Šubartum occidental à l'avénment de Zimrî-Lîm," FM VI, 2002, p.158–169).



Map 2 From D. Charpin et N. Ziegler, *Mari et le Proche-Orient à l'époque amorrite*, FM V, Paris, 2003, p. 171.

In other words, the pasture land of the Sim'alite nomads lay in a vast crescent zone of rather rich farming lands stretching from the Ḫamrin mountain (Mt. Ebiḫ) to the western limit of the Habur triangle (Map 2). There were a number of small kingdoms in Idamaraṣ. It was "kings" of these small kingdoms that Itūr-Asdu, a high official of Mari, assembled in Tarmanni at the command of Zimri-Lim to urge them to choose Zimri-Lim as their suzerain.[20]

The mainstay of these kingdoms was farming, and their citizens were farmers. Farming communities needed dairy products, meat and, possibly, man power of the nomads, while the latter needed grazing land with a good supply of water and salt for their small cattle as well as grain and oil[21] for their own consumption. The mutually complementary relations between the nomads and the farmers were expressed, for example, by Ibāl-El, the *merḫûm,* in the the following terms: "(Sim'alite) nomads are your shepherds and you (= people of Idamaraṣ) are their farmers."[22]

It was the responsibility of the *merḫûm* to keep a tight rein on the Sim'alite nomads who spread wide over the vast pasture land, and to secure a good relationship with the "kings" of small kingdoms and their subjects.[23]

20 The speech Itūr-Asdu made is quoted in his letter to Zimri-Lim (A.482). A portion of this letter was made known by G. Dossin in *Syria* 19, 1938, p. 117–118, but the full text is still unpublished. See J.-M. Durand, M.A.R.I. 5, p. 230 for a new reading of the text and D. Charpin et N. Ziegler, FM V, p. 230 for the historical background of this letter.

21 See, for example, M. Guichard, FM VI, 2002, p. 158, 164.

22 *ḫa-na*^{MEŠ} *re-u*$_2$*-ka u*$_3$ *at-ta* LU$_2$.ENGAR-*šu* (A.3901:18' = M. Guichard, FM VI, 2002, p. 160).

23 A convenient exposition on *merḫûm* is found in D. E. Fleming, *Democracy's Ancient Ancestors. Mari and Early Collective Governance*, Cambridge, 2004, pp. 76–85.

4. The *merḫûm* and the Sim'alite Nomads

I had an occasion to mention the name of Ibāl-El. Another *merḫûm* is Ibāl-pî-El. These two are the most well documented *merḫûm*s in connection with the Sim'alite nomads during the reign of Zimri-Lim. I am aware that there existed *merḫûm*s in Shamshi-Adad's Kingdom of Northern Mesopotamia (hereafter Shamshi-Adad's Kingdom) as well as among the Yaminites[24] but I would not discuss about them this time, as I said earlier.

4-a. Appointment of the *merḫûm*

Whenever a *merḫûm* official wrote a letter to Zimri-Lim, he called himself "your (Zimri-Lim's) servent" which normally indicated in the officialdom of these days that the said person was a royal appointee. Yet, we have no information about the appointment of either of these two *merḫûm*s. However, there are two letters which shed some light on this question.

One is a letter of Bannum (A.1098), who served as a *merḫûm* in the Shamshi-Adad's Kingdom and contributed greatly to Zimri-Lim's return to the royal seat of his grandfather.[25]

> If (Sim'alite) nomads press you to appoint another *merḫûm*, saying, "If Bannum, our *merḫûm*, continues to stay on the Banks of the Euphrates River, we would appoint another *merḫûm*," you should answer them, as follows: "Earlier he stayed in the pasture land (*nawûm*), but the foundations of the Sim'alites, Numḫa and Yamutbal are firmly established. He came to the Banks of the Euphrates River, liberated the strongholds and established your foundations on the Banks of the Euphrates River. Now, as for me, since I came here (to Idamaraṣ), I left that man to strengthen (the defense of) the Banks of the Euphrates River. As soon as I return, I will send your *merḫûm* back to yo[u]." Your should answer them thus.[26]

Bannum had already been a *merḫûm* in Shamshi-Adad's Kingdom and established himself as a leader not only among the Sim'alites but also in Numḫa and Yamutbal located south of Mt. Sindjar. According to the people's opinion, it seems that they could appoint a *merḫûm* as they wanted, but this could not be true, as a letter of Shamshi-Adad written in response to Yasmaḫ-Addu's inquiry indicates.

> Another matter. Concerning what you [wrote to me] regarding appointing Ḫab[duma-Dagan] (son of) Ayala-sumû to the [position of *merḫûm*], Ḫabduma-Dagan is suited to the appointment for *merḫûm*, as [you wrote to me]. What is his governorship? Does he govern a wide land? Let him govern Tuttul and (in addition) exercise his *merḫûm*-ship. Let him govern Tuttul as his colleagues govern a wide land, so that his land may be as wide as his colleagues' land.[27]

This text shows two things: one is that a *merḫûm* was a royal appointee at least in Shamshi-Adad's Kingdom. The other is that a position of *merḫûm* was superior to that of a governor, again, at least in Shamshi-Adad's Kingdom.

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24 A survery on the *merḫûm*s among the Yaminites is found in J.-M. Durand, Amurru 3, 2004, p. 160–163.

25 See D. Charpin et N. Ziegler, FM V, 2003, p. 144 and p. 174, n. 31.

26 See P. Villard, "Nomination d'un Scheich," in D. Charpin et J.-M. Durand (eds.), FM II, Paris, 1994, p. 297 for the transliteration of this passage, its French translation and a study on Bannum as a *merḫûm*.

27 (5') *ša-ni-tam aš-šum ḫa-ab-*[*du-ma-*^{d}*da-gan*/ ^{l}*a-ia-la-su-mu-u*$_2$ *a-na* [*me-er-ḫu-tim*] / *ša-ka-nim ta-aš-pu-ra-am ki-ma ša t*[*a-aš-pu-ra-am*]/ *ḫa-ab-du-ma-*^{d}*da-gan-ma a-na me-er-ḫu-*[*tim*]/ *ša-ka-nim i-re-ed-du mi-nu-um ša-pi*$_2$*-ṭu*$_2$*-us-su*$_2$/ (10') *tu-ša-ma ma-tam ra-pa-aš*$_2$*-tam i-ša-ap-pa-a*[*r*]/*u*$_3$ *tu-ut-tu-ul*^{ki} *li-iš-pu-ur u*$_3$ *me-er-ḫu-tam li-pu-uš*$_2$/ *u*$_3$ *ki-ma* LU$_2$.MEŠ *tap-pu-šu ma-tam ra-pa-aš*$_2$*-tam i-ša-ap-pa-ru*/ *u*$_3$ *šu-*[*u*$_2$ *t*]*u-ut-tu-ul*^{ki} *li-iš-pu-ur u*$_3$ *ki-ma ma-tim*/ *ša tap**-[*pu-šu*] *i-ša-ap-pa-ru šu-u*$_2$ (ARM I, 62:5'–14').

4-b. Protection of the Sim'alite nomads and their herds

The *merḫûm* had many roles to play, but the most important among them may be the one of protecting the Sim'alite nomads and their herds. This is reflected in the words of assurance with which Ibāl-El concluded some of his letters[28] to Zimri-Lim, namely "the herds and the Sima'alites are all right."

Ibāl-pî-El, for example, had extispicies taken regarding the safety of the four pasture lands, namely the pasture of the steppe, the pasture east of Mt. Sindjar, the pasture west of Mt. Sindjar, and the pasture (south) of Mt. Sindjar, when the nomads began to establish their camps. The text is poorly preserved, but it seems to have turned out that only the omens for the pasture of the steppe were auspicious and the rest were not auspicious.[29]

In spite of these precautionary measures, unfortunate things can happen. Apparently, a loss was found in a herd and the news reached Zimri-Lim. Ibāl-El[30] had to respond to an inquiry from the king, saying, "People of Ašargayum and Sim'alites should inquire me about the loss," meaning that he would assume the responsibility for the loss.[31] Ibāl-El then wrote in the same letter (A.915) that he had regrouped the remaining herd and evacuated them out of the Yamutbal region.

Ibāl-El also reported in the same letter (A.915) an incident with a herd and how he dealt with it.

> Nomads of a wadi let their sheep fall (victims to an epidemic?), and complained, saying, "Why doesn't the *merḫûm* come and take care of his herd?" I heard their complaint, and went to Dēr and appeased the nomads of the pasture by talking to them.[32]

4-c. Establishing good relations with kingdoms in Idamaraṣ

The pasture lands for the Sim'alite nomads could spread out in the vast zone of the Upper Jazirah, but Idamaraṣ was their proper pasture land. It was important for the nomads to have a good relationship with the farming communities in or near their pasture lands. The *merḫûm* sought to establish such a good relationship by concluding a treaty with kinglets in the region as proxy for Zimri-Lim.

Following is a letter(ARM II, 37) sent to Zimri-Lim by Ibāl-El. Note that "to kill a donkey" is a Sim'alite term for concluding a treaty. Killing an animal or animals was a symbolic act indicating, probably, that one who breaks the treaty will suffer from the same fate as the slaughtered animal(s).

> Say to my lord. Thus says Ibāl-El, your servant: The letter of Ibāl-Addu came from Ašlakkâ. (And so) I went to Ašlakkâ. They brought a puppy and a goat to "kill a donkey" between (Sim'alite) nomads and Idamaraṣ, but, fearing my lord, I did not allow (them to use) a puppy and a goat. As for me, I had a donkey, born of a mother donkey, killed. (Thus) I established a treaty between the (Sim'alite) nomads and Idamaraṣ. In the entire Idamaraṣ up to Hurrâ (Sim'alite) nomads will be sated, and one who is sated has no enemy. Let my lord rejoice. Two days after I send this letter from Rataspatum. I shall arrive at my lord's place. The herds and the Sim'alites are fine.[33]

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28 *na-wu-um* u_3 DUMU *si-im-a-al ša-a-lim* (ARM II, 33:21'–22') and *na-wu-um* u_3 DUMU *si-im-ha-al ša-*[*l*]*im* (ARM II, 37:25).

29 [*a-tu*]*-ur-ma ki-ma na-wu-u*[*m i-n*]*a ša-ka-ni-ša*!/ *a-*[*na-ku*] *te-re-tim a-na* 4 *q*[*a*]*-ta-tim*/ *a-*[*na šu*]*-lum na-we-e-em* u_2*-še-pi*$_2$*-iš*$_3$/ [*qa*]*-ta*[*m i*]*š-te-*[*e*]*t a-na na-we-e-em ša qa-ṣe-e-em*/ u_2*-še-pi*$_2$*-*[*i*]*š-*[*ma te*]*-re-tum ša a-na na-*<*we*>*-e-em*/ [*š*]*a qa-*[*ṣ*]*e-e-e*[*m ša-a*]*l-ma qa-tam ša-ni-tam*/ *a-na na-we-e-em š*[*a i-na a*]*q-da-ma-at* ^{d}SAGGAR$_2$/ u_3 *a-ḫa-ra-tim* [*ša-a*]*k-na-at* u_2*-še-pi*$_2$*-iš-ma*/ *te-re-tum ša a-na na-we-e-*[*em š*]*a i-na* ^{d}SAGGAR$_2$/ *ša-*[*a*]*k-na-at la-ap-ta*) (ARM XXVI/1, 180:5–14 [A.4470]).

30 The addressee (Zimri-Lim) and the sender (Ibāl-El) of this letter are restored by J.-M. Durand. See Amurru 3, 2004, p. 142.

31 *a-na ḫi-ṭi*$_3$*-tim mi-im-ma a-ša-*[*ru*]*-*[*ga-yu-u*$_2$*-um*]/ u_3 DUMU *si-ma-a-al*^{MEŠ} *li-ša-la-a*[*n-n*]*i* (This interpretation is taken from J.-M. Durand, ARM XXVI/1, p. 143–144).

32 LU_2 *ḫa-na*^{MEŠ} *ša na-ḫa-li* UDU.HA$_2$/ u_2*-ša-am-qí-it-ma ut-ta-as-sa*$_3$*-mu*/ *um-ma šu-nu-ma a-na mi-nim me-er-ḫu-um*/ *la i-la-kam-ma na-wa-*{ŠU}*-šu*/ *ú-ul i-pa-la-as*$_2$ *ta-az-zi-im-ta-šu-nu*/ [*e*]*š-me-e-ma a-di de-er*^{ki}/ [*a*]*l-li-ik-ma i-na a-wa-tim*/ [*li-*]*ib-bi na-we-im* u_2*-ni-iḫ*(A.915, ARM XXVI/1, p. 143).

33 *a-na be-li*$_2$*-ia qi*$_2$*-bi*$_2$*-ma*/ *um-m*a *i-ba-al-*AN/ IR$_3$*-ka-a-ma*/ *tup-pi*$_2$ *i-ba-al-*^{d}IM *iš-tu aš*$_2$*-la-ak-ka*^{ki}/ (5)*ik-šu-da-am-ma a-na aš*$_2$*-la-ak-ka*^{ki}/ *al-li-ik-ma a-na ha-a-ri-im qa-ṭa*$_2$*-li-im*/ *bi-ri-it ḫa-na*^{MEŠ} u_3 *i-da-ma-ra-aṣ*/ *me-ra-na-am* u_3 *ha-az-za-am iš-šu-ni-im-ma*/

This treaty was probably concluded in Ašlakkâ, a seat of an important kingdom in Idamaraṣ.

Actually, Ibāl-El send to the king another letter (A. 2226) which, according to D. Charpin, reported the conclusion of the same treaty. Of the two letters, A.2226, which is quoted below, is considered to have been written prior to the one quoted above.

> Say [to] my lord. Thus says Ibāl-El, your servant: Išme-Addu, a man of Ašnakkûm, elders of the land of Idamaraṣ, elders of Urgiš, Šinaḫ , Ḫurrâ and elders of Yapṭur came to Malaḫatum and Yatar-Malik, a man of Šuduḫum and A[pil-Sîn] , man of Ašnakkûm and the dignitaries of Urgiš came and said, "[Let us] kill a puppy for our [oath-taking]", but I did not [consent], [say]ing, "From before till [now] our lord [Zimri-Lim] [has never killed] [a goat] [nor] a puppy for [oath-taking]." I bought a donkey, and I had a donkey born from a mother donkey killed. . . .[34]

This letter reveals that not only such kingdoms in Idamaraṣ as Ašnakkûm, Urgiš, Šinaḫ, Ḫurrû and Šuduḫum but also Yapṭur which was located to the northwest of Idamaraṣ joined the treaty. D. Charpin dates this treaty to Zimri-Lim's 10th regnal year when the intervention of Eshnunna and Elam in this region began to recede.[35]

This treaty's primary purpose was to secure the right to pasture in Idamaraṣ, but it is without saying that it also meant to be a suzerain treaty between Zimri-Lim, the king of Mari, and kinglets in Idamaraṣ, as the concluding words of Ibāl-El at the end of the letter indicates. He says: "The land (Idamaraṣ) in its entirety surely prostrated to my lord! Let my lord rejoice! "(A.2226:22'-23')

4-d. The *merḫûm* and the army of nomads

Another important role of the *merḫûm* is to organize and to command an army of (Sim'alite) nomads. The Yaminites on the Banks of the Euphrates River, after two unsuccessful uprisings against Zimri-Lim, accepted the census taking and agreed to contribute their contingents to the Mari army, but contingents of Sim'alite nomads were equally an important part of the Zimri-lim's army.[36]

It was a responsibility of the *merḫûm* to organize and command an army of nomads. Their primary obligation is to serve Zimri-Lim but they sometimes served kinglets of small kingdoms in their pasturing zone at their request as a part of the give-and-take deal between the nomads and the farming communities.[37] For example, Ḫabdu-Malik, a high-ranking Mari official temporarily staying in Andariq, quotes in his letter to Zimri-Lim a request from Atamrum, the king of Andariq. Atamrum wanted Ḫabdu-Malik to go to see a *merḫûm*, in stead of staying in Andariq, so that he and the *merḫûm* together may organize a contingent of Sim'alite nomads and come to help Andariq with the

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be-li$_2$ *ap-la-aḫ ma-a me-ra-na-am*/ (10)*u*$_3$ *ha-az-za-am u*$_2$*-ul ad-di-in*/ [*ḫa*]*-a-ra-am* DUMU *a-ta-ni-im*/ [*a*]*-na-ku u*$_2$*-ša-aq-ṭi*$_3$*-il*/ *ša-li-ma-am bi-ri-it ḫa-na*^{MEŠ}/ *u*$_3$ *i-da-ma-ra-aṣ aš-ku-*[*u*]*n*/ (15) [*a-d*]*i ḫ*[*u*]*-ur-ra-a*^{ki}/ *i-na i-da-ma-ra-aṣ ka-li-šu*/ *ḫa-na*^{MEŠ} *i-ša-ab-bi-i-ma ša-bi-'u*$_5$*-um*/ *ge-re-em u*$_2$*-ul i-šu-u*$_2$/ *be-li*$_2$ *li-iḫ-du tup-pi*$_2$ *an-ne*$_2$*-e-em*/ (20) *i-na ra-ta-as-pa-tim*^{ki}/ *a-na ṣe-er be-li*$_2$*-ia u*$_2$*-ša-bi-*[*l*]*a*]*-am*/ *wa-ar-ki tup-pi*$_2$*-ia an-ne*$_2$*-e-*[*i*]*m*/ *a-di* U$_4$ 3 KAM *a-na ṣe-er be-li*$_2$*-*[*i*]*a*/ *a-ka-aš-ša-da-a*[*m*]/ (25) *na-wu-um u*$_3$ DUMU *si-im-'a*$_4$*-al ša-lim* (A.1056 = ARM II, 37) (The transliteration is taken from D. Charpin, *M.A.R.I.*, 7, 1993, p. 185.) We have a letter of almost the same content sent to Šunuḫru-ḫal (A.1056 = D. Charpin, M.A.R.I. 7, No. 9, p. 182–184).

34 [*a-na*] *be-li*$_2$*-ia qi*$_2$*-bi*$_2$*-ma*/ [*u*]*m-ma i-ba-al-*AN IR$_3$*-ka-a-ma*/ ^{1}*iš-me-*^{d}IM LU$_2$ *aš-na-ak-ki-im*^{ki}/ LU$_2$ ŠU.GI.MEŠ *ma-at i-da-ma-ra-aṣ*^{ki}/ (5) LU$_2$ ŠU.GI.MEŠ *ur-gi-iš*$_3^{ki}$ *ša ši-na-aḫ*^{ki}/ *ša ḫu-ur-ra-a*^{ki} u$_3$ LU$_2$ ŠU.GI.MEŠ *ia-ap-ṭu*$_2$*-ur*/ *a-na ma-la-ḫa-ti*^{ki} *il-li-ku-nim-*[*m*]*a*/ ^{1}*ia-tar-ma-lik* LU$_2$ *Šu-du-ḫi-im u*$_3$ *a-*[*pil-*^{d}SU'EN]/ [LU$_2$] *aš-na-ak-ki-im u*$_3$ *qa-qa-da-at ur-gi-iš*$_3^{ki}$/ (10) [*pa-ni*]*-šu-nu iṣ-ba-tu-nim-ma il-li-ku-nim*/ [*um-ma-m*]*i* UZ$_3$ [*u*$_3$] *me*$_2$*-ra-nam a-na* [*za-ka-r*]*i-ni*/ [*i ni-i*]*q-ṭu-u*[*l*] *u*$_3$ *a-na-ku u*$_2$*-ul* [*am-gu-ur*]/ [*um-ma a-n*]*a-ku-ma iš-tu pa-na a-di wa-*[*ar-ka*]/ [*ma-ti*]-[*ma*] *be-el-ni* ^{1}*zi-im-r*[*i-li-im*]/ (15) [U]Z$_3$ [*u*$_2$]*-lu-ma me*$_2$*-ra-nam a-na* [*za-ka-ri-im u*$_2$*-ul iq-ṭu*$_2$*-ul*]/ *a-na-ku* ANŠE *a-na* KU$_3$.BABBAR *a-ša-*[*am*]/ ANŠE *ḫa!-a-ra-am* DUMU*-ra a-ta-n*[*im u*$_2$*-ša-aq-ṭi*$_3$*-il*]/ [x x x ANŠE] *ḫa-a-ri-im š*[*u-*/ (. . .) (The reverse is omitted.) (A.2226 = D. Charpin, M.A.R.I. 7, 1993, No. 7).

35 See D. Charpin, "Išme-Addu d'Ašnakkum," M.A.R.I., 7, 1993, p. 168–171.

36 A letter (A.4280), though dated to Yaḫdun-Lim's reign, gives us some idea on the constitution of the Mari army at the time of Yaḫdun-Lim. An army which accompanied a large group of captives was composed of 172 (Sim'alite) nomads and 290 "people of cities" in the districts on the Banks of the Euphrates River. See D. Charpin, "Nomades et sédentaires dans l'armée de Mari au temps de Yaḫdun-Lim," Amurru 3, 2004, p. 83–94.

37 See, for example, M. Guichard, Amurru VI, 2002, p. 158.

contingent.[38]

Yassi-Dagan, a general of Mari, wrote a long letter to Zimri-Lim, saying: "Now, let my lord consult with his officials and, following his consultation (with them), let him have omens taken. And according to the auspicious omens or if it is a "go" sign, let my lord come. If otherwise, let my lord write to the *merḫûm* so that he may come here, commanding one or two thousand (Sim'alite) nomads."[39]

That would be a huge army, if the total size of Zimri-Lim's army amounts to a little more than 4.000, as estimated by D. Chanpin.[40]

4-e. The *merḫûm* and the provincial governor

Finally, I would like to draw your attention to the friction between the provincial governor whose territory of responsibility was definable and the *merḫûm* who moved with Sim'alite nomads who practiced transhumance.

Yaqqim-Addu, the governor of the district of Saggarātum, dispatched some of his officers who were stationed in outposts (*bazaḫātum*) to the place called Lasqum to check the situation there and received a report that a herd of (Sim'alite) nomads were grazing . . ., and (their) enclosures (*ḫaṣīrātum*) reached Lasqum. Yaqqim-Addu says:

> This is because my lord (Zimri-Lim) earlier warned us, the *merḫûm* and myself, and they examined the matter. Let my lord keep watch on the *merḫûm*. God forbid that damages would occur and my lord would say, "Why didn't you examine the matter and write to me?" I write to my lord. Let my lord know that my district is (also) the district of the *merḫûm*.[41]

Lasqum was, according to J.-M. Durand, a high terrace-land located near modern Halabiye at the mid-point between Deir-ez-Zor and ar-Raqqa on the Euphrates River[42] and was a place of an earlier contention between farmers of Yaqqim-Addu's district and (Sim'alite) nomads. Although Lasqum was located in the district of Saggarātum and hence fell in Yaqqim-Addu's jurisdiction, he hesitated to talk to the *merḫûm* directly. Instead, he asked the king to intervene, because the *merḫûm* was a royal appointee and reported only to the king.

List of Abbreviations

ARM	Archives royales de Mari. Transcrites et traduites, Paris
FM	Florilegium marianum, Paris
JANES	Journal of the Ancient Near Eastern Society of Columbia University, New York
LAPO	Littératures anciennes du Proche-Orient, Paris
M.A.R.I.	Mari Annales de Recherches Interdisciplinaires, Paris
RA	Revue d'assyriologie et d'archéologie orientale, Paris
R. I.M.E.	The Royal Inscriptions of Mesopotamia. Early Periods, Toronto

38 A.2125:1–15 in D. Charpin, ARM XXVI/2, No. 389.

39 A.1025:77–81: *i-na-an-na be-li*$_2$ IR$_3$-*di*^{MEŠ}-*šu li-iš-ta-al-ma ak-ki-ma mu-uš-ta-lu-ti-šu/ te-re-e-tim li-še-pi-iš-ma a-na zi-im te-re-e-ti-šu ša-al-ma-tim/ šum-ma ša a-la-ki-im be-li*$_2$ *li-il-li-kam u*$_2$*-la-šu-ma/* (80) *be-li*$_2$ *a-na ṣe-er* LU$_2$ *me-er-ḫi-im li-iš-pu-ur-ma* 1 *li-im u*$_2$*-lu-ma* 2 *li-im ḫa-na/* LU$_2$ *me-er-ḫu-um pa-ni-šu li-iṣ-ba-tam-ma a-na ṣe-ri-ni li-ik-šu-dam-ma* (from J.-R. Kupper, M.A.R.I. 6, p. 337–347).

40 D. Charpin, Amurru 3, 2004, p. 89.

41 M. Birot, ARM XIV, 81:9–16.

42 J.-M. Durand, ARM XXVI/1, p. 125-127 for the location of Lasqum.

THE DESERT ROUTES AROUND THE DJEBEL BISHRI AND THE SUTEAN NOMADS ACCORDING TO THE MARI ARCHIVES†

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The archives found in the palace of Mari by André Parrot between 1934 and 1939 offer a wealth of information about the Ancient Near East in the 18th century B.C.[1] Of some 20,000 tablets and fragments, 8,600 texts (of which 2,500 letters) have been published in full by now.[2] Cities as far as Hattuša in Anatolia, Hazor in Palestine, or Susa in Iran are very well documented;[3] regions closer to Mari are naturally even better attested. Paradoxically, this is not the case with Djebel Bishri: whereas places close to Bishri such as Lasqum or Halabit are documented each by more than a dozen of entries,[4] Bisir is very rarely mentioned in the texts from Mari. Of course, the toponym can be found in personal names such as Abi-Bisir[5] or Mut-Bišir,[6] in adjectives qualifying a divinity such as Eštar-bišra[7] or in a dog race typical of the region;[8] the mountain Bishri is also, as is Sindjar, part of the pantheon: it is mentioned among the gods a king of the region of Sindjar is referring to as he takes an oath that validates his alliance with Zimri-Lim.[9] But otherwise, evidence is fairly small for the toponym as such. In the texts published so far I have found only two.[10] However, an analysis of the sources shows that the region of Bišri is well documented in the texts from Mari, even if its name is not always explicitly mentioned.

We shall see first that the Bišri was bypassed by different routes leading from the Middle Euphrates to Qaṭna, either from the north (by travelling through Abattum) or from the south (via Tadmer/Palmyra.) Other examples show that, when nomadic groups, Yaminites as well Sim'alites, were leaving the banks of the Euphrates with their herds inland in the direction of Bishri, they ran the risk of falling victim to raids. The authorities tried hard to dissuade them from doing so. The

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1 The most recent synthesis has been published by J.-M. Durand, D. Charpin *et al.*, "Tell Hariri / Mari : textes", in *Supplément au Dictionnaire de la Bible* 14, Paris, 2008, col. 214–436.

2 These figures have been established thanks to the database ARCHIBAB (www.archibab.fr). The great number of texts that are only known from citations of extracts are not included.

3 For a geographical overview of the sources see D. Charpin & N. Ziegler, *Mari et le Proche-Orient à l'époque amorrite: essai d'histoire politique, Florilegium marianum V*, Mémoires de NABU 6, Paris, 2003, pp. 20–27.

4 It is the zone where the Djebel Bishri joins the valley of the Euphrates; see the contribution of J.-M. Durand to this volume.

5 Or Abu-Basar. See J.-M. Durand, "La religion à l'époque amorrite d'après les archives de Mari", in G. del Olmo Lete (ed.), *Mythologie et Religion des Sémites Occidentaux. Volume I. Ebla et Mari*, OLA 162/I, Louvain, 2008, pp. 161–716 (p. 697).

6 J.-M. Durand, "L'emploi des toponymes dans l'onomastique d'époque amorrite (I) Les noms en mut-", *SEL* 8, 1991, pp. 81–97 (p. 84–85).

7 J.-M. Durand, "La religion à l'époque amorrite d'après les archives de Mari", p. 249.

8 ARM 26/1 271: 5 (UR.GI$_7$.RA *bi-is-sé-e*) and 272: 6 (UR.GI$_7$.RA *bi-is-re-e*). The interpretation of J.-M. Durand has been adopted by W. Heimpel, *Letters to the King of Mari*, MC 12, Winona Lake, 2003, p. 280.

9 F. Joannès, "Le traité de vassalité d'Atamrum d'Andarig envers Zimri-Lim de Mari", in D. Charpin & F. Joannès (eds), *Marchands, diplomates et empereurs. Études sur la civilisation mésopotamienne offertes à Paul Garelli*, Paris, 1991, pp. 167–177 (p. 177).

10 In ARM 16/1, J.-R. Kupper listed the references of the Bishri in ARM 5 27 : 26 and 6 44 : 6. No other mention is found in the texts published so far; the reference to the Bishri in the index of ARM 26/1 p. 587 [no. 13 : 21] needs to be deleted. For a further example see the unpublished A.521+, cited below.

population of Bishri was essentially made up of two groups: Yaminites of the tribe of the Uprapeans, and Suteans. Amongst the latter, some people discovered treasure in the Bishri. The Suteans knew how to guide caravans that preferred not to follow the Euphrates, but their role was ambiguous: they sometimes seem to have attacked messengers travelling through the Bishri. Finally, we shall see some characteristics of the environment of the Bishri and the problem of the etymology of the mountain's name.

The Bishri, on the route between the Middle Euphrates and Qaṭna

The first point that needs be examined concerns the routes that were linking the Middle Euphrates to the region of Qaṭna. They were the object of a pioneering study by J.-M. Durand[11] who was able to find the fragment of ARM I 85 that was missing,[12] a letter by Samsi-Addu to his son Yasmah-Addu, the king of Mari. The latter was about to leave with a big army for Qaṭna. His father warns him:

"You have written that you were about to leave with the army. But travelling with an army, isn't that something difficult? Indeed, you are a novice. Until now, you have had no great experience of these routes. La'um and Mutu-Bisir are used to receive many letters; now, talk to them und take your decisions depending on your discussions with them. Mutu-Bisir (besides) has large experience of these routes. Get yourself informed about these routes. Send several persons that they may enquire in your place about the water supply and decide depending on the detailed report they will bring …

The water, will it suffice to water the armies? The armies that are to move are big ones: there are 20,000 men that are about to move, the donkeys, their provisions as well as the *avant-garde* of these armies; (the water) will it suffice? If, before your departure, you do not know where to rely on concerning the access to water on these routes, the decision (to leave) should not be taken; given that there are Uprapeans that have experience of these routes, send the people that have experience of these routes so that they know in your place where to rely on concerning the supply of water on these routes."

This letter tells us that the Euphrates and Qaṭna were linked by routes passing through the desert and that this fact caused serious problems concerning the supply with water, in particular for a big army. Samsi-Addu continues his instructions to his son in these terms:

"Send me a detailed report: which route is the right one for the march of the army? Is the high route the right one? Is the middle route the right one? Is the low route the right one? Is straight on from where you are right for the march of the army? The army, will it depart from Abattum? Will it depart from Halabit? Or will it depart straight on from where you are? Send people everywhere so that they know in your place where they can rely on regarding the access to water on these routes. Send me a detailed report so that I myself can give instructions here and that the troops will meet at the point where they are to leave. If the army is taking the high route, from the heart of the country to …, Qirdahat, Dêr, Malhatum and Tuttul; then, from Tuttul they will reach Abattum. If the army is taking the middle route, they will move to Dunnum along the border of the desert. … depending on the route … (lacuna of 7 l.) … will take as route and go … according to the route … I have sent you this message … that they know where to rely on concerning the access to water on these routes. Send me a detailed report, and the troops will meet according to the tablet you will send me. The … and the people, that will leave in order to know where they rely on concerning

11 J.-M. Durand, "Documents pour l'histoire du royaume de Haute-Mésopotamie (I)", MARI 5, 1987, pp. 155–198 (in part. pp. 159–167 "C. Les trois routes de l'Euphrate à Qatna à travers le désert").

12 See now the translation by J.-M. Durand in LAPO 17 pp. 19–23 (no. 449) that contains some changes in comparison to his previous one in MARI 5.

water, send them to me so that I can talk to them. Besides, the diviners accompanying you, Zimri-Dagan, Naram-Sin, Im… and Apil-ilišu, son of Ibal-pi-El, need to take their decisions carefully. Before you depart, the oracles at Qaṭna must be taken."

Samsi-Addu was to send troops to Yasmah-Addu from the region of Šubat-Enlil: the question was where they would join the Euphrates. The three routes outlined in the document are described as "high" (*elîtum*), "middle" (*qablîtum*) and "low" (*šaplîtum*).[13] There is obviously no point in trying to find material evidence for these routes, as our Finnish colleagues have done for the stone routes of the Roman-Byzantine epoch.[14]

The fragmentary character of the document does not allow for any certain reconstructions except for the "high" route. A point of reference that is absolutely certain is Tuttul (Tell Bi'a). But the localisation of Qirdahat at Hasseke is also very likely,[15] as is the one of Abattum at Tell Thadayin.[16] Rather than supposing a direct link between Resafa and Salemiye, it seems to me more likely that this route continued to the south and led to Sukhne: it passed the Bishri by the west before leading to Tadmer/Palmyra.

The description of the "middle" route mentions sometimes Halabit (l. 37) and sometimes Dunnum (l. 49); in his contribution, Jean-Marie Durand has shown why a location at Halebiye/Zelebiye is very likely. This middle route passed the Bishri by the south before leading to Tadmer/Palmyra.

According to Jean-Marie Durand, the "low" route could be reconstructed only by comparison with evidence from Roman and medieval times; instead of passing directly by the Bishri, this route could have passed more to the South before reaching the Euphrates at the level of modern Deir ez-Zor, as the present route that leads from Palmyra to the Euphrates.

Luckily, we possess a draft reply of Yasmah-Addu to his father. I am indebted to N. Ziegler for having come across this text, which is not yet published (M.11301). Its great merit is to confirm and further elucidate what has been already known from the letter of Samsi-Addu:

"Previously, my lord wrote to me concerning the decision to be taken regarding the wells on the route to Qaṭna. I assembled […] the men that are knowledgeable about the wells and I sent to my master the men knowledgeable about the wells, (*ie*) the Uprapeans. But up to now my master has not sent me any confirmation. At present, I have asked Mut-Bisir about the route to Qaṭna. He spoke thus: 'I … Neither the route that is 'in front of' Mari, nor the route that is 'in front of Dur-Yasmah-Addu' are convenient. [5 lines damaged] The army may take the route of Abattum.' [the remainder is unfortunately in a very bad condition]"

Yasmah-Addu does not talk about the "situation of the water" (*warkat mê*) in general like Samsi-Addu, but more precisely about the wells (*burâtum*) that could serve to supply the army. Besides, the document, in spite of its bad condition, invites us to reconsider the "low" route. It left from Mari and led from there directly to Tadmer/Palmyra. In other words, we have finally evidence for the route between Palmyra and Dura-Europos – well attested for the classical period – being already

13 We are dealing with one of most ancient explicit descriptions of an itinerary. On the subject, see the papers edited by M. F. Fales in *KASKAL* 3 and cp. F. M. Fales, "Treading the (Military, Commercial, And Cultural) Itineraries of the Ancient Near East (Udine, September 1–3, 2004). An Introduction", *KASKAL* 3, 2006, pp. 105–108.

14 Close to Tell Tabus. See M. Lönnqvist et al., "Archaeological Surveys of Jebel Bishri. The Preliminary Report of the Finnish Mission to Syria, 2000–2004", *KASKAL* 3, 2006, pp. 203–240 (p. 229 fig. 24; in colour on http://www.helsinki.fi/hum/arla/sygis/assets/image048.jpg).

15 D. Charpin, "Un itinéraire paléo-babylonien le long du Habur", in E. Cancik-Kirschbaum & N. Ziegler (eds), *Entre deux fleuves – Historische Geographie Obermesopotamiens im 2. Jt. v. Chr.*, BBVO 20, Berlin, 2009, English version: "An Old Babylonian Itinerary along the Habur", in H. Kühne (ed.), *Dur-Katlimmu Studies* 1, Berlin, in press. I depart from the localisation "Qirdahat (Ras el-'Aïn ?)" suggested by J.-M. Durand, "Peuplement et sociétés à l'époque amorrite. (I) Les clans bensim'alites", in C. Nicolle (ed.), *Nomades et sédentaires en Mésopotamie. Compte rendu de la XLVIe Rencontre Assyriologique Internationale, Paris, 10–13 juillet 2000*, Amurru 3, Paris, 2004, pp. 111–198 (p. 126).

16 K. Kohlmeyer, "Euphrat-Survey", *MDOG* 116, 1984, p. 112; D. Charpin, "Tell Munbaqa, Ekallâtum-sur-l'Euphrate", *NABU* 1993/32.

in use in the 18th century B.C.[17]

It is therefore no surprise that Mut-Bisir had excluded it from being used by an army of several thousand men. Even the route leaving from Abattum posed a problem: at the end of the letter M.11301, Mut-Bisir indicates to Yasmah-Addu that is was only possible to use it with groups of 2,000 men one after the other, and not with 20,000 people at once. It evidently needed some time to let the wells refill themselves after one group had passed.

Several remarks are necessary before leaving the topic. Of course, these letters only talk about a project and we do not know what was finally decided and really done. But the discussions prove the existence of several routes linking the Middle Euphrates and Qaṭna in the 18th century B.C. What Samsi-Addu and his son were discussing is whether it would be possible to use one of the routes with an army of several thousand men. There is no doubt, on the other hand, about these routes being used on a regular basis by nomads, merchants and messengers.[18] In any case, we see that these routes, as those known from later times, carefully avoided the Djebel Bishri and that they passed it either by the north or by the south.

The Bishri, a dangerous zone even for nomads

It was not only for the fact that the region was mountainy that the routes avoided to pass through the Djebel Bishri: the region had a bad reputation. That we are dealing with a dangerous zone, is shown by a letter of Tarim-šakim to Yasmah-Addu:

"As regards the Yaminites that were moving in the direction of mount Bishri, the King (= Samsi-Addu) has sent me the following message: 'Send express messengers to your Lord Yasmah-Addu and to Sin-teri so that they may talk with each other. Indeed, each on his own, they will suffer harm.' (Everywhere) from upstream to downstream, I have given express orders and here is what has been said to me: 'They have returned.' I was too late, and the Yaminites had already crossed (the Euphrates). May my Lord write me what has to be done."[19]

As we see here, the intervention of Tarim-šakin was too late in order to retain the Yaminites from crossing the Euphrates and heading into the Djebel Bishri.

Later, under Zimri-Lim, we are assisting at a different case: now it is the Sim'alites that were in danger of being robbed by the Yaminites. A yet unpublished letter by Hali-hadun relates how a group of Sim'alites left the valley of the Euphrates to pasture in the Bishri. But a group of 300 Yaminites tried to pursue them in order to rob them of their herds. Two women that had been captured by the Yaminites managed to escape from Abattum and informed Hali-hadun about the situation. The latter notified the king and concluded:

"It is necessary that my Lord give strict orders in order to ensure that this troop does not escape! Alternatively, this transhumant group (*nawûm*) that has settled in the Bisir (*ša ina Bisir saknat*) has to move in the direction of the east bank (*aqdamatim*)."[20]

The Yaminites were thus in control of Abattum, the point of departure of one of the routes leading to Palmyra as we have seen.

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17 See M. Gawlikowski, "Palmyre et l'Euphrate", *Syria* 60, 1983, pp. 53–68.

18 For these three groups see my contribution "La circulation des commerçants, des nomades et des messagers dans le Proche-Orient amorrite (XVIIIe siècle av. J.-C.)" in C. Moatti (ed.), *La mobilité des personnes en Méditerranée de l'Antiquité à l'époque moderne. Procédures de contrôle et documents d'identification*, Collection de l'Ecole française de Rome 341, Rome, 2004, pp. 51–69 (revised English version "Controlling Cross-border Traffic" as chapter 8 of my book *Writing, Law and Kingship: Essays on Old Babylonian Mesopotamia*, Chicago University Press, Chicago, in press.) For the existence of a route that allowed messengers to reach Qaṭna in ten days from Terqa (a distance of ca. 350 km) see F. Joannès, "Palmyre et les routes du désert au début du deuxième millénaire av. J.-C.", MARI 8, 1997, pp. 393–416 (p. 397 n. 23).

19 ARM 5 27 [= LAPO 17 627].

20 Unpublished A.521+. I would like to thank J.-M. Durand for having communicated to me his edition of this document.

The Suteans of the Bishri

However, the group of nomads that seems to have dominated the Djebel Bishri was made up of Suteans.[21]

The discovery of treasure

I shall begin with a revelatory anecdote: according to a report by the governor of Mari, Bahdi-Lim, to king Zimri-Lim, the Suteans had discovered treasure in the Bishri:

"Say to my Lord: thus speaks Bahdi-Lim, your servant. Previously, when my Lord was in Saggaratum, before his departure, I have sent an expedition: the Suteans of the clan of Mehalisayu have discovered hidden treasure in the Bishri. It is reported to be a lot of silver. Some say it is up to [x] talents, others say is up to 2 talents, even others say it is up to 10 mines. There is no agreement on the issue. Having learnt about this event, I say to Hammi-telu … (lacuna). ... the silver of my Lord. … That is what I said to him among other things. Hammi-telu replied to me in this way: 'A purse of silver has been found and it is Hazirum who has found the said silver. They have divided it and for the quarter … I am bringing the news about the Suteans that I have heard. Presently, you are informed about the affair. I shall write again.' Thus spoke Hammi-talu to me. I have sent him a message on my behalf and the news … but Abi-sare up to now … the silver…"[22]

As we see, it is all about rumours: extravagant speculations were circulating about the amount of silver that had been discovered. The responsible Mariote was asking a Sutean leader, Hammi-telu, who in turn reported what he had learnt. The affair shows in any case that the Suteans were crisscrossing the Bishri (otherwise they would not have made the discovery.) It could be tempting to think that what they had found were the contents of an even more ancient tomb, but the remainder of the letter speaks about a purse of silver discovered by a certain Hazirum.

The 'protection' of the caravans

The Suteans knew to escort caravans that chose to travel along the Euphrates, but did not want to follow the valley. This is attested for the journey of the messengers of Tilmum, between Babylon and Mari[23]. But it is also true for the travellers who passed along the Djebel Bishri. Nevertheless, the protection they offered was ambiguous, as it was also possible to ask them for help if one were to attack travellers. This is clear from a letter written by Samsi-Addu that has recently been published by N. Ziegler.[24] Samsi-Addu planned to have Babylonian messengers attacked on their return from Yamdad. He contacted two Sutean leaders and offered them 10,000 sheep for a raid on the caravan. The Bishri is not explicitly mentioned, but it is very likely that attack was meant to take place there.

One could also mention the attack by Suteans of a group of Mariotes and Babylonians between the Euphrates and Palmyra.[25]

A storm in the Bishri…

An unpublished letter by Mut-Bisir shows us how, obviously after a rain during a storm, truffles

21 The only overview available is far from being satisfactory (M. Heltzer, *The Suteans*, Istituto Universitario Orientale Seminario di Studi Asiatici. Series Minor 13, Naples, 1981.) On the Suteans in the Mari archives (and in partic. on the different clans) see F. Joannès, MARI 8, p. 408, n. 36.

22 ARM 6 44 = LAPO 18 1047.

23 See N. Ziegler, "Tilmuniter im Königreich Samsî-Addus," in E. Olijdam & R. H. Spoor (eds.), *Intercultural relations between South and Southwest Asia. Studies in commemoration of E. C. L. During Caspers (1934–1996)*, BAR International Series, 2008, pp. 253–259.

24 N. Ziegler, "Samsî-Addu et la combine sutéenne", in C. Nicolle (ed.), *Nomades et sédentaires en Mésopotamie. Compte rendu de la XLVIe Rencontre Assyriologique Internationale, Paris, 10–13 juillet 2000*, Amurru 3, Paris, 2004, pp. 95–109.

25 F. Joannès, MARI 8, pp. 401–402 no. 2.

grew in the steppe (today's *kam'a*).[26] Mut-Bisir, after having sacrificied to the storm-god Addu, collected them and proposed to send them to Yasmah-Addu together with ostrich eggs he had cooked:

"Say to my Lord (= Yasmah-Addu): thus (speaks) your servant Mut-Bisir. In the Paššur (*i-na pa-aš-šu-ur*), I have sacrified to Addu who forever protects the life of my Lord; I have taken the truffles and the ostrich eggs and I […] – the truffles have been watered (by the rain) and are very tender. And I said to myself: 'I would like to have them brought to my Lord.' But Ka'lalum [refused], saying: 'My Lord does not … these eggs!' Consequently, I cooked them here. At present, I have just sent to my Lord the truffles and the eggs that I collected myself so that he may eat them!"[27]

The term that poses a problem in the text is *paššur*. In Babylonian, the word means 'table, tray'. Although it is admittedly not followed by the geographical determinative KI here, it is in the absolute state: it is thus very likely that we are dealing with a toponym. It would be obviously a steppe-like place given that mention is made of truffles and ostrich eggs. In addition, the author of the letter is Mut-Bisir, a native of the region of Bishri who was very familiar with it. From this, one may ask oneself whether Paššur does not designate the Bishri. J.-M. Durand already proposed in ARM 2 107 [LAPO 16 354] for the word *paššurum* 'table' the meaning "une hauteur plate, en mésa, sans doute une avancée du Bishri"[28]:

"Another topic. There happen to be *ṣanṣar*-locusts in the valley – the part of the valley of Dur-Yahdun-Lim – (exactly) between Paššur ('the Table') and Saharata. Nothing can be done against the locusts. I now send these locusts to my Lord."

One may ask whether Paššur does not mean here that part of the Bishri pointing in the direction of the Euphrates valley.[29] One could go even further and suppose that *paššur* is the etymology of the name Bishri: we would encounter the toponym sometimes in its Amorite form (Bisir) and sometimes in its Babylonian form (Paššur).

Conclusion

This study provides first of all a lesson in methodology: the case shows that approaches that are exclusively relying on attested names are insufficient.[30] Besides, it has become clear that studies of a region such as the Djebel Bishri are necessarily of a multidisciplinary character: the Mari archives contain precious complements to the results of the surveys and excavations done by Finnish and Japanese archaeologists. They allow us to see that the Bishri was above all a zone frequented by nomads with their herds. They chose it as the place to bury their relatives; these funeral monuments served as a point of reference in the landscape, and one knew where exactly which ancestor was buried, as shows the following letter by Yaqqim-Addu:

"On the day I sent my present tablet to my Lord, Kuṣan, messenger of Karkemiš, Šamaš-redi and a friend of his, (people of my Lord,) who were travelling from Karkemiš to my Lord: four Uprapeans attacked them at the funeral monument (*humusûm*) of Ayalum."[31]

By such an indication king Zimri-Lim was supposed to understand where the incident happened. The marked tribal character of these monuments becomes apparent in a letter by the Rabbean leader Dadi-hadun:

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26 On the truffles see most recently the comments made by J.-M. Durand LAPO 16, pp. 311–312.

27 Unpublished A.688, brought to my attention by J.-M. Durand and N. Ziegler, whom I thank.

28 LAPO 16, comment of no. 354 on p. 552.

29 See the photo http://www.helsinki.fi/hum/arla/sygis/assets/image032.jpg.

30 The same observation holds for the vocabulary: a study of debt relief in Mari cannot limit itself to collecting the occurrences of the word *andurârum/uddurârum* (cp. D. Charpin, "Un édit du roi Ammi-ditana de Babylone", in press.) One sees why electronic databases that are equipped only with a single word research engine remain, despite all their usefulness, insufficient.

31 FM 8 29: 4–12. Published by J.-M. Durand, *Le Culte des pierres et les monuments commémoratifs en Syrie amorrite, Florilegium marianum VIII*, Mémoires de NABU 9, Paris, 2005.

"About the *hamusûm*-monument of which I have talked to you – it is a funeral monument (*râmum*); it is five years ago that this *hamusûm*-monument was erected, and since then I have passed by ten times from upstream or from downstream: never did I touch this *hamusûm*-monument. During my present journey, when I left for you, I had reached Muban when I was told: 'The *hamusûm*-monument of Ayalum has been destroyed.' I did not want to believe it. I arrived in Halabit and received confirmation of it. Even then, I refrained from believing it, until I sent two servants and they saw this *hamûsum*-monument. Then I grew very angry and held my hand over the *hamusûm*-monument of [Lahu]n-Dagan. They certainly destroyed the one that was erected on a territory that was not their own, whereas I did not destroy the one that was erected on my own territory, before they commenced."[32]

The Rabbeans were one of the five tribes of Yaminites. During their annual transhumance,[33] their leader Dadi-hadun had tolerated a monument erected in memory of Lahun-Dagan, a recently deceased Uprapean leader; but when external people destroyed the monument of his ancestor Ayalum, he immediately sought revenge.

Another text mentions gold and silver that was buried in a tomb.[34] This obviously explains the number of robberies in ancient times that are attested by the excavations in the region.

32 FM 8 30: 5–31.

33 The ten passages over a period of five years are a clear allusion to this phenomenon. For the movements of the nomads see J.-M. Durand, "Peuplement et sociétés à l'époque amorrite. (I) Les clans bensim'alites", in C. Nicolle (ed.), *Nomades et sédentaires en Mésopotamie. Compte rendu de la XLVIe Rencontre Assyriologique Internationale, Paris, 10–13 juillet 2000*, Amurru 3, Paris, 2004, pp. 111–198.

34 FM 8 32.

ADMINISTRATION AND SOCIETY IN THE CITY OF ṬĀBATUM AS SEEN IN THE OLD BABYLONIAN TEXTS FROM TELL TABAN†

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1. Old Babylonian texts from Tell Taban

In the winter season of 2005, after an interruption of five years, the Japanese mission resumed excavation at Tell Taban, which is located about 19 kilometers south of Hassake, Syria. The excavations have continued since, in the five summer seasons of 2005, 2006, 2007, 2008 and 2009, under the directorship of Hirotoshi Numoto of Kokushikan University. This new series of excavations has uncovered a large number of cuneiform inscriptions.[1] The majority of them originate in the Middle Assyrian period, including hundreds of administrative-legal tablets and various objects (bricks, cylinders, nails, etc.) bearing commemorative inscriptions, but a few dozen Old Babylonian tablets and inscribed envelopes have also been unearthed.[2]

As early as 1920, E. Forrer identified Tell Taban with the city of Ṭābetu of Middle-Assyrian and Neo-Assyrian sources,[3] and this was fully verified by the commemorative texts found at Tell Taban and Tell Bderi, which were published by S. M. Maul.[4] This Assyrian-period city of Ṭābetu can now also be safely identified with the Old Babylonian Ṭābatum, a city often mentioned in the texts from Mari (Tell Hariri) and Chagar Bazar, as W. Heimpel has discussed.[5] The identification has now been further supported by its attestation in three letters found at Tell Taban written in the Old Babylonian period.[6]

The majority of the Old Babylonian materials, totaling 25 pieces including tablets, tablet fragments and inscribed envelopes, were excavated during the two successive summer seasons of 2005 and 2006.[7] These were found in a rectangular room measuring about 3m by 2m in trench 8, which was opened at a point on the western side of the mound.[8] They had been exposed to fire. These

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† This is a revised version of my paper read in the symposium under the title "Amorite Societies along the Lower Habur according to the Tell Taban Tablets". The content has been considerably modified since then. I would like to express my sincere gratitude to all of those who gave me scholarly advice and offered generous support, which greatly aided my revision. I thank especially D. Charpin, J.-M. Durand, M. Guichard, L. Marti, I. Nakata, D. Shibata and N. Ziegler. Needless to say, I am responsible for any errors and inaccuracies that still remain in this paper.

1 For the excavations from 2005 to 2007, see Numoto 2006, Numoto 2007, Numoto 2008 and Numoto 2009.

2 For those inscriptions, see Shibata 2007, Yamada 2008 and Shibata and Yamada 2009.

3 Forrer 1920, pp. 19 and 144.

4 Maul 1992 and Maul 2005.

5 Heimpel 1996, pp. 105f. For the references to the city of Ṭābatum in the sources from Mari and Chagar Bazar, see Wäfler 2001, pp. 176f. (s.v. "Ṭabatum") with further attestations in Durand 2002, p. 87, no. 26, l. 8, Lacambre and Millet-Albà 2008, p. 104, no. 173, l. 7.

6 URU *ṭà-ba-tum*.KI (Tab T05B-44, l. 11), [URU *ṭà-b*]*a-tim*.KI (Tab T06-3+Tab T06-17, l. 3), [URU *ṭà*]-*ba-tim*.KI (Tab T06-9, l. 13).

7 See Yamada 2008 for the texts found in the 2005 (summer) and 2006 seasons of excavations. A fragment of an Old Babylonian copy of the Weidner god list (Tab T07-1) and an Old Babylonian administrative text with a year name of Yadih-abu (Tab T07-3) were found on the surface of the mound in 2007. The former is to be published by D. Shibata (Shibata forthcoming). For the latter, see Shibata and Yamada 2009, pp. 89–91 with Numoto 2009, pl. 48 (photograph). A fragment of a late Old-Babylonian tablet bearing a contract of adoption was further excavated in 2009. All the texts, including those discussed here, will be published with full editions and hand copies in monographic volumes in the series of final reports on the cuneiform texts from Tell Taban.

8 Numoto 2008, pp. 3–5.

Old Babylonian materials include 16 letters and letter fragments, as well as six legal-administrative texts and three school-text fragments. My short paper discusses some of the letters and legal-administrative texts with the aim of gaining a better understanding of the social-administrative aspects of the city of Ṭābatum and its surroundings.

2. Yasīm-Mahar and the city of Ṭābatum

Of the aforementioned 16 Old Babylonian letters, eight are sent to a certain Yasīm-Mahar (Tab T05B-41, Tab T05B-42, Tab T05B-43, Tab T05B-44, Tab T06-1, Tab T06-9, Tab T06-10, Tab T06-12+Tab T06-14). Another two fragmentary letters are also possibly addressed to him, though the addressees' names are partly damaged (Tab T06-3+Tab T06-17, Tab T06-11); and one letter referring to him as the sender must be a draft or copy of a letter sent out from him (Tab T06-13). Thus, it appears that the majority of the letters, if not all, originally belonged to his "private" archive. The senders of these letters include the king Iṣī-Sumuabi (Tab T05B-42, Tab T05B-43, and probably also Tab T06-3+Tab T06-17), local leaders who considered themselves as equals (*ahum* "brother") of Yasīm-Mahar residing in or around Ṭābatum (Tab T06-1, Tab T06-9, Tab T06-10, Tab T06-12+Tab T06-14), as well as members of Yasīm-Mahar's family or clan (see below, e.g., Tab T05B-41 and Tab T05B-44).[9]

Yasīm-Mahar is attested also in a land grant (Tab T06-4) and an administrative text (Tab T05B-39) excavated from trench 8.[10] The grant was issued to "Yasīm-Mahar, son of Sumat-Erah," by "Iṣī-Sumuabi the king," confirming the royal grant of two tracts of fields along the Habur river and a house, all apparently located in the city of Ṭābatum. As I have discussed elsewhere,[11] Iṣī-Sumuabi is most probably to be identified with the king of Terqa in the post-Hammurabi period who is attested in one of the contracts found at Tell Ashara, ancient Terqa (Rouault 1984, Text 9), in which an oath is taken in the name of Iṣī-Sumuabi as king as well as in the names of the gods Dagān and Itūr-Mēr.[12] Thus, it appears that Ṭābatum was in the sphere of influence of the kingdom of Iṣī-Sumuabi and that Yasīm-Mahar was the local representative of Ṭābatum, whose position was authorized by the king.

Yasīm-Mahar seems to have represented the city as *sugāgum,* an office that may be translated as "sheikh" or "mayor". As previous studies have shown, under Mari rule, a *sugāgum* was nominated from each town or tribal community to serve as its local representative in its dealings with the royal house of Mari.[13] Officials bearing the title *sugāgum* were set continuously at Ṭābatum, with their position being authorized by the king of Mari, as is shown by a letter written during the reign of Zimri-Lim sent from Zimri-Addu, governor of the Qaṭṭunān province (ARM 27, no. 107). The letter shows that the *sugāgum* was granted lands by the royal house and his clan was obliged to pay some silver to the king.[14] Since also a certain Bina-Ištar (⌜*bi-na-iš*$_8$*-tár*⌝) is attested as bearing the title of *sugāgu*(*m*) in a contract made in Terqa at the time of Iṣī-Sumuabi the king (Rouault 1984, Text 9: 23), the institution of *sugāgum* must have survived Hammurabi's destruction of the Mari kingdom and continued under the rule of Terqa in the post-Hammurabi period. The lands in the royal land grant referred to above were thus probably given to Yasīm-Mahar in regard for his services as *sugāgum*.

9 The rest of the letters (Tab T05B-45, Tab T06-2, Tab T06-6, Tab T06-15, Tab T06-16) are either correspondence between other persons, or letters where the correspondents are unclear due to breaks.

10 See Yamada 2008, pp. 49–54; cf. modifications and suggestions in Durand 2008 and Yamada forthcoming.

11 Yamada 2008 and Yamada forthcoming.

12 I am following the broadly accepted understanding that after the destruction of Mari by Hammurabi, Terqa became the capital of the Middle Euphrates region. D. Charpin, however, believes it possible that Mari somehow survived the destruction to be the capital of the region also in the Post-Hammurabi period. Cf. Charpin 2004, pp. 358f.

13 Nakata 1987; Fleming 2004, pp. 64-76; Charpin 2007, pp. 170–173; recently and most elaborately Marti 2008, esp. pp. 1–19.

14 For the nature of the payment of silver or animals for the *sugāgūtum* tax or for some other reason, see Marti 2008, esp. pp. 10–19.

An examination of the letters from Tell Taban sheds further light on administrative and social aspects of the city of Ṭābatum. One of the letters from Iṣī-Sumuabi (Tab T05B-42) illustrates the responsibility that Yasīm-Mahar took for the royal house of Iṣī-Sumuabi. Its opening reads: "Say to Yasīm-Mahar. Thus says Iṣī-Sumuabi: Do not procrastinate about the city, the irrigated areas and the watch posts" (ll. 1–7).[15] This shows that Yasīm-Mahar took full responsibility for the security of the city of Ṭābatum, its surrounding irrigation districts and the watch posts. The same letter records the king's order for Yasīm-Mahar to collect and store the "tax-barley (*še-im* GÚ.UN)" from the region and to carry silver, straw and other agricultural products to appropriate places. Similarly, during the Zimri-Lim period, a district governor of Qaṭṭunān transported barley from Ṭābatum southward to Qaṭṭunān (ARM 27, no. 5). It is notable that the letter to Yasīm-Mahar refers to certain persons named Hiṣnī-Addu and Zanzi as persons expected to work with him in storing and transporting the agricultural products. It appears that they were influential persons residing in or around the city of Ṭābatum who together with Yasīm-Mahar had collective responsibility for the management of various affairs in Ṭābatum.

The same letter of Iṣī-Sumuabi mentions also a certain Tâṣī-Annu (*ta-ṣí-an-nu*): "You (Hiṣnī-Addu and Yasīm-Mahar) are to collect the barley of Tâṣī-Annu, and you (Yasīm-Mahar) are to put it in the store house" (ll. 17–19).[16] Two letters from this Tâṣī-Annu (Tab T05B-41, Tab T05B-44) are among the tablets discovered in trench 8. This person could have been female, as suggested by the personal name, which is composed of the feminine prefixed verbal form (*ta-*) of the west-Semitic root *yṣ'* and the divine element Annu, which probably represents a female deity, at least here.[17] Thus, the name means "the goddess Annu came out".[18] Tâṣī-Annu never appears with an appellative such as "brother (*ahum*)," "father (*abum*)," "son (*mārum*)" etc. in relation to Yasīm-Mahar. This is in notable contrast to a number of other senders of the letters from trench 8 who refer to themselves as "your brother" and thus represent themselves as a male equal of Yasīm-Mahar (see above).[19] This suggests that Tâṣī-Annu may not have been a male local leader.

One of Tâṣī-Annu's letters (Tab T05B-44), after the opening words of blessing, states: "It is well for the gate of your (= Yasīm-Mahar's) office (*ekallum*)".[20] Since Tâṣī-Annu is reporting on the current good state of Yasīm-Mahar's office, the letter was probably written when he was absent from the city of Ṭābatum; it was presumably sent to him from Ṭābatum and brought back to the city with him. Thus it seems that Tâṣī-Annu is a close relative, perhaps the wife, of Yasīm-Mahar who is taking care of the house during his absence.[21] The letter (Tab T05B-44) deals with several matters: (1) the delivery of silver from Tâṣī-Annu to Yasīm-Mahar to be paid to a certain Suri-epuh,

15 (1) *a-na ia-si-im-ma-h*[*ar*] (2) *qí-bí-ma* (3) ⌜*um*⌝*-ma i-*⌜*ṣi*⌝*-su-mu-a-bi-ma* (4) *a-na* URU.KI *sa-la-hi-im* (5) *ù ma-aṣ-ṣa-ra-tim* (6) *ni-di a-hi-im* (7) *la ta-ra-aš-*⌜*ši*⌝

16 (17) *še-em ša ta-ṣí-an-nu* (18) *pu-uh-hi-ra-ma* (19) *a-na na-aš-pa-ki-im šu-pu-uk*.

17 I. Nakata and J.-M. Durand kindly pointed out to me that the name Tâṣī-Annu appears to be female. For the frequent attestation of the divine element Annu in feminine personal names in Mari texts, see Nakata 1973, pp. 299–307 and Durand 2008, pp. 182f. Durand suggests that Annu is the pronoun *annû* "this" and refers to an unnamed deity ("un dieu non nommé"), which can be either a god or a goddess. There is strong tendency for Annu to appear as the first element in female names, e.g. Annu-tarām "Annu has loved," Annu-ummī "Annu is my mother" (for more examples, see Nakata 1973, pp. 301–304; cf. also Durand 2008, p. 182). However, there are cases where Annu is the second element like *ta-ši-im-an-nu* (ARM 21, no. 407, ii 19), indicated as female (MUNUS). N. Ziegler generously informed me that the name Tâṣī-Annu is attested several times in her data base of Mari personal names and appears once with the feminine determinative.

18 Cf. Streck 2000, p. 192 (*Tayṣī-'annu* "Erschienen ist 'Annu").

19 For the use of such appellatives in the Old Babylonian letters, see Sallaberger 1999, pp. 49–73.

20 *a-na* KÁ É.GAL-*li-ka šu-ul-mu*. The word *ekallum,* which normally means a large structure such as a royal palace, is probably used here for a house of modest size that functioned as the office of the *sugāgum*. The royal grant mentioned above refers to a house of 1+1/3 SAR (c. 48 m^2) as a part of the property granted from the king to Yasīm-Mahar; this house may be the office referred to in the letter.

21 Suggestion of J.-M. Durand.

(2) the delayed payment of silver to a certain Halu-rabi,[22] which Tâṣī-Annu asks Yasīm-Mahar to carry out immediately, and (3) the release of a certain Dadi-epuh from the workhouse. These issues might be interrelated, though their exact background remains unclear.[23] Regarding the second matter, Tâṣī-Annu asks Yasīm-Mahar and a certain Hanan, apparently a man of Ṭābatum accompanying Yasīm-Mahar, to pay the silver to Halu-rabi immediately. Though the exact circumstances requiring this payment are unknown, it was so urgent that Tâṣī-Annu even wrote that she/he would come to Yasīm-Mahar with a colleague called Hattam to push him to take action.

3. Conclusion

Most of the Old Babylonian texts found at Tell Taban concern a certain Yasīm-Mahar. The texts suggest that he represented the local society of Ṭābatum and its hinterland as a whole before the king of Terqa, probably holding the office of *sugāgum* "sheikh/mayor". Presumably he was nominated for his office from a major local clan, and his position was eventually authorized by the king of Terqa, with whom he corresponded directly.[24] Yasīm-Mahar seems to have led the local civil governance, whose nature was relatively collective. The people mentioned in the letters as working with Yasīm-Mahar are probably members of his family or clan, possibly including a woman (i.e., Tâṣī-Annu). It is very likely that we find here a society similar to that known from the texts of Mari, where a *sugāgum* acted in cooperation with a group of local people, which included a "lieutenant/deputy (*laputtûm*)" and "elders (*šībūtum*)" as the most eminent members.[2]

Postscript

After the completion of this article, J.-M. Durand generously sent me some significant data from his files, including three unpublished lists of personal names in which *Ta-ṣí-an·nu* appears as a male name. It thus appears that Tâṣī-Annu could be either a male or a female name. This forces us to be more careful in judging the gender of persons bearing this name, especially in the case of the sender of the letters from Tell Taban (Tab T05B-41, Tab T05B44) discussed above.

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Abbreviations: ARM 21 = Durand 1982; ARM 27 = Birot 1993

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22 *ha-lu!-ra-bi* (on erasure), with anomalous LU and BI on erasure followed by two excessive *winckelhaken*s (l. 24). This person may possibly be identified with the Halu-rabi known from texts found at Tell Leilan (ancient Apum) as an important ruler who sent letters as equal to the three kings of Apum, i.e. Mutia, Till-Abnû and Yakun-Ašar, chronologically parallel to the last years of Hammurabi and almost the entire reign of Samsuiluna. His geo-political background is unfortunately never stated explicitly in the epistolary corpus of Tell Leilan, though he was certainly in contact with Ṭābatum (Eidem 2008, esp. p. 295).

23 The other letter of Tâṣī-Annu (Tab T05B-41) deals with the silver which Yasīm-Mahar took from Tâṣī-Annu for an unknown purpose. In the letter, Tâṣī-Annu asks Yasīm-Mahar to give it back to her/him.

24 Sumu-Hammû, "the governor of Qaṭṭunān (*šāpiṭ Qaṭṭunān*)," whose administrative realm certainly composed a part of Iṣī-Sumuabi's kingdom, is attested in the above-mentioned grant from Tell Taban as the first of the witnesses (Tab T06-4, l. 30). However, this does not necessarily mean that Ṭābatum was included in the administrative realm of the Qaṭṭunān district. N. Ziegler kindly noted that recent studies show that Ṭābatum was outside the administrative realm of the Qaṭṭunān district in the time of Zimri-Lim. This situation may have continued also in the time of Iṣī-Sumuabi.

25 Fleming 2004, pp. 64–76; Marti 2008, pp. 1–19; cf. also Charpin 2007, pp. 170–173.

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THE BANKS OF THE EUPHRATES ALONG THE BISHRI†

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Dominique Charpin's task was to show what the Mari texts can tell us about the Bishri region, and about the routes crossing or bypassing it which have linked East and West since that era.

My aim is more modest – to situate the eastern edge of the Bishri in its geographical context and to examine its relationship with the course of the Euphrates, which represents the principal axis of settlement and the region's foremost watering place for animals.

a) The boundaries of the kingdom of Mari on the upstream Euphrates

The upstream boundary of the kingdom of Mari was at Dûr Yahdun-Lîm, which bears a typical name for a frontier city, according to the use of a toponym beginning with BÀD^{ki}(= *dûrum*, *dunnum*).

It is in this context that one should understand relations with Tuttul (Tell Bi'a, near the site of modern Raqqa, at the confluence of the Balikh and the Euphrates): during the considered period at least, this was a site lying outside the kingdom of Mari, but one which it was worthwhile to control as an outpost.

- Under Yahdun-Lîm, the king of Mari gains power over Tuttul and seems to take the title of "king of Tuttul[1]".
- Under Sumu-Yamam, his son and successor, the kingdom is restricted to Halabît and Saggâratum, so Tuttul is abandoned.
- Under the kingdom of Upper Mesopotamia, Tuttul is a major citadel against the West (Aleppo Kingdom) and North-West (Zalmaqum, that is to say the Harran region); when it falls, this allows Zimrî-Lîm to march upon Mari.
- Under Zimrî-Lîm, the city is outside the kingdom[2]: it is autonomous in terms of its municipal structures, but the king of Mari has a representative (*hazzannum*) installed there who oversees the city at close quarters[3]. It lies on a major axis of penetration of the Mâr yamîna (so called Benjaminites), who reached the Balikh river via Halabît and Tuttul and thus made contact with Zalmaqqum[4].

Our interest today is therefore the land between Halabiya and Dûr Yahdun-Lîm, which is beyond the kingdom, but on the road towards the outposts, close or far, which watch over the North of the kingdom.

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† I would like to thank Prof. K. Ohnuma and his collaborators for their invitation and their warm hospitality in Tokyo. This paper is exactly what was presented during the meeting, with the adjonction of some notes. Many thanks to Prof. D. Feissel (EPHE, CNRS, Paris) with whom I could talk about the itineraries of Isidoros of Charax and of Ptolamy. Of course responsibility of views are mine.

1 For a visit of Yahdun-Lîm at Tuttul, cf. J-M. Durand & L. Marti, "Chroniques du Moyen-Euphrate, 3", *RA* 98, 2004, p. 121–150, spec. p. 129–130.

2 As it is well known from now on, thanks to D. Charpin, Zimrî-Lîm was never called "king of Tuttul ", as his father Yahdun-Lîm, cf. *Florilegium marianum* V, p. 182, n. 90.

3 We have many letters sent by Lanasûm, *hazzannum* for Zimrî-Lîm at Tuttul. These letters give a vivid view of political and religious situation at Tuttul till at least the war against the Elamites and we are accordingly well informed about this great city. Many letters have been quoted since the first reading of Mari's documents by G. Dossin, and even fully published. But we are now to expect the systematic publication of those documents by L. Marti in a next *Florilegium marianum*.

4 We possess major informations about this fact thanks to Lanasûm's (and other Mari officials') letters but also thanks to tablets sent by Mâr yamîna kings themselves to Zimrî-Lîm.

b) Information provided by Greek sources

This section of the Euphrates has always been an axis of military or commercial penetration. Up to now we have had at our disposal (besides indications given by casual travellers as Xenophon) two large-scale itineraries giving details of population centres in the area:

b.1 Ptolemy V 18: on the right bank of the Euphrates[5]:

Thapsacus	
Birtha	Zenobia (?)
Gadirtha	Zenobia (?)
Auzara	Dêr ez-Zôr

b.2 Isidorus of Charax 1: on the left bank[6]:

Nicephorium	Raqqa
Galabatha	
Khumbana	
Thillada Mirrhada	
Sanctuary of Artemis	
Allân	
Beona	
Phaliga[7]	
Nabagath	
Khabur	Habur

It has proved extremely difficult to identify the location of all of these settlements.[8] The only

5 Cf. René Dussaud, *Topographie historique de la Syrie antique et médiévale*, BAH IV, 1927, p. 455. Dussaud's work was a seminal contribution since its publication. Of course, it relies on the documentation at hands in 1927, but Ancient History specialists rely till now on this book and it is impossible to ignore it. Today, this part of the Euphrates valley is still ignored in Geyer and Monchambert's work, *La Basse vallée de l'Euphrate syrien*, BAH 166, 2003, except in the first volume p. 152–155 and some comments on ancient texts in the second volume, p. 239 sq. and sqq, by Monchambert. For the region around Halabiya, cf. J.-L. Montero Fenollos *et al*., "Le projet archéologique 'Moyen-Euphrate syrien' = Travaux récents sur la frontière septentrionale du royaume de Mari", <http://studiaorontica.org> et *Sudia Orontica* II.

6 Cf. R. Dussaud, *ibidem*, p. 465. In BAH 166, p. 146–152 only 3 toponymes, outside the here considered zone are discussed.

7 The situation of Phaliga site is much debated. Isidorus says it is on the Euphrates, near the Khabur. Obviously for its meaning the toponym is related to the akkadian *palgu*, hebr. *pèlèg*, etc. "ditch ", as seen very early by V. Scheil ; but the greek author specifies that the meaning is the "middle of the distance" (μεσοπορικον). There is no means to find a Semitic, Greek or Iranian (by way of folk etymology) word to explain that "explanation". So, one wonders if there is not here a misunderstanding about ancient Mišlân, modern Ramadi. Its important wadi (W. es Suab) was known in Antiquity as "Wadi of Mišlân" and this was a region with important ditches ; on the other hand, *mišlu* is the obvious local term for "middle" and it was possible to explain the toponym by this "folk etymology". We must add that the great canal of the Mišlân region according to Mari's texts was called Hubur, from the Khabur river. So the notation of Isidorus of the proximity of the Khabur and Phaliga (alias Mišlân) would be an other token of his confusion. If this explanation is sound, it would urge not to take too tightly was is said in details by Isidorus who could have taken his information at random.

8 In the same way, we may consider the question of "Merrhan" which is equated with the great Mari, alias Tell Hariri (BAH 166, p. 151). The notation with a -h- is wrong and due to the fact that a – rr- was noted in greek manuscripts with two ', the second breathing being rough (whence the H). Now, how to explain those – rr- and the suffixe *–ân*? The best answer would be to derive the toponyme from the root MRR "be bitter"; there was indeed a lot of ancient toponyms (of course in the kingdom of Mari) the name of which was made with roots indicating they were near/on salted spots, such as Mulhân for instance. So Merrân might be understood as "the Salted one, The town the waters of which are bitter", probably whithout any relation with the ancient Mari. Even if it is possible that "Giddân" (see later) was the ancient Hiddân, we must not try to explain all the toponyms of Isidorus or Ptolemy's lists

fact they are said "on the left bank" is astonishing for the reader of the texts of the II[nd] millenium and one must deduce from this how great was the changing of human settlements in those regions after Mari's period.

c) Toponyms in Mari's texts upstream of Terqa and downstream of Halabiye

Consideration of a new documentary source, namely Mari's texts, allows us to reinterpret these much-debated itineraries.

(a) The major centre of the intermediate region seems to have been Dûr Yahdun-Lîm.

Some words about Dûr Yahdun-Lîm's localisation, which must be searched for surely on the right bank of the Euphrates : the actual site is unknown[9] but the ancient town corresponds approximately to modern Dêr ez-Zôr's region, when one takes in consideration the itineraries from Terqa to Halabît (the actual Halabiye) and the roads from the Euphrates to Tadmer in Antiquity[10]. Anyway, this Euphratic region is a small one and there is not so many places where to search a spot convenient for a regional capital.

We may add that Dêr ez-Zôr's site pictures before the second world war show that it was the place for finding remains of extensive irrigation works[11]. This could refer to Yahdun-Lîm's work.

So, the "province" of Saggâratum-Dûr Yahdun-Lîm was named after its two principal settlements, one downstream and one upstream, which were major fortresses, one North-Westwards, the other North-Eastwards. We can understand easily why the coordination of the defence of the North of the kingdom was given to one and single man[12].

Dûr Yahdun-Lîm was not on the Euphrates, but set relatively far back, no doubt on high ground for better protection: this is what is observed with Arab defensive fortresses the length of the Euphrates, which are readily found on the mountain ridge and not in the valley.

The kingdom ends at Dûr Yahdun-Lîm, whose territory centred upon an important canal (the *nârum Ishîm-Yahdun-Lîm*) which however does not seem to have gone downwards very far, e.g. up to Terqa. The region of Dûr Yahdun-Lîm serves as a complement to the zone of Saggâratum, which does not extend far (only one day's march) up the Habur river[13].

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as reflexes of the great ancient cities. One must explain "Mirrhada" (= marrata) of Thillada Mirrhada as an attributive meaning "salted". Thillada corresponds certainly – as seen since long – to Thelda of Ptolemy, which may document the toponym alone, without attributive.

9 Many identifications with modern sites have been proposed. The identification with Tell Mohassân (cf. Geyer-Monchambert, BAH 166, p. 137, whose interpretation is based – to say the least – on hurried readings, cf. p. 136, n. 74) must be denied as too near of Terqa (the kingdom would be very small indeed) ; that with Halabiye (as does Montero Fenollos) on the contrary would be too far! We do know that the *halṣum* ("province") of Terqa and the *halṣum* of Dûr Yahdun-Lîm adjoined, since some hamlets belonged according to the years to one or another provinces. Workers of these hamlets could be convocated occasionnaly at Terqa for irrigation works as those from Saggâratum or Mari. It is never the case for the *halṣum* of Qattunân which was separated from the Kernland of the kingdom by an important noman's land. That was exactly the same for the region of Halabît, far away upstream.

10 From Tadmer to the Euphrates existed three roads, one of them ended at Dêr ez-Zôr, according to medieval arab sources. During his lecture, D. Charpin quoted a very interesting unpublished text, M.11301, completing the "three routes to Qatna" I published in *MARI* 5, 1987, p. 159–167 (map, p. 162). The king of Mari says : "Neither the route which is 'in front of Mari' nor the route which is 'in front of Dûr Yasmah-Addu' are convenient". Unfortunately the tablet is broken at this crucial point, so it does not prove that "from Dûr Yasmah-Addu" must be equated with "from Halabît". In my opinion, this remark gives the clue for the rather enigmatic indication "from before you" (l. 38 : *ištu mahri-kâ-ma*) given by Samsî-Addu to his son, which means "from your kingdom", that is to say "from Dûr Yasmah-Addu till Mari".

11 Cf. the photography of Dêr ez Zôr before second world war, in BAH 166, p. 184.

12 For the same reason the two places fortified by Sumu-Yamam were Halabît (Halabiya) and Saggâratum. One can even venture that Saggâratum was a founding of king Sumu-Yamam.

13 For the situation of Saggâratum approximately at Circesium (i. e. the confluence of the Khabur and the Euphrats) and the extent of the province alongside the Khabur, cf. my articles in Entre deux fleuves. Untersuchungen zur historische Geographie Obermesopotamien im 2. Jachttausend, E. Cancik-Kirschbaum & N. Ziegler, edd., *BBVO* 20, Berlin, 2009 and *Dur Katlimmu Studien* 1, H. Kühne éd. (both in press).

– Near to Dûr Yahdun-Lîm there existed two important cities on the Euphrates: Gânibatum, its own port, and Tillazîbim[14]. These were true cities which could defend themselves independently. Gânibatum is the place where the craft of the new queen Shiptu berthed. Its name likely comes from a term related to the Arabic *jānib* "coast, beach".

The name of the major city was exactly Dûrum, which is liable to be filled out with the name of whoever is currently king – Yahdun-Lîm or Yasmah-Addu. However, the city was never called *Dûr Zimrî-Lîm. It was possible to speak of it by the simple *dûr bêli-ia* = « my lord's Fortress ».

An essential text for the understanding of its unterland is the yet unpublished A.3550 the date of which is the great rebellion of the Mâr yamîna:

«The different cities which surround Dûr Yahdun-Lîm – Hurrân, Nahadû, Yûm-hammû (and) Narâ – gathered within Dûr Yahdun-Lîm".

This text, therefore, mentions those cities of minor importance which depend closely on Dûr Yahdun-Lîm: it is unsurprising that Gânibatum and Tillazibim are missing from the list. They were able to resist by themselves.

The understanding of the meaning of the toponymes may help us to realise where they stand:

– Hurrân means 'That of the cavern', no doubt an allusion to habitations dug out of the wall of the cliff dominating the river valley.

– Narâ means 'city of the canal'.

– Meanwhile, the other two names make explicit reference to Mâr sim'al nomads (= the so-called Bensim'alites), as Nahadû and Yûm-hammû are two well known nomadic Bedouin clans of their tribes. They must have acquired lands in the region[15] but are still in the process of settlement.

Nahadû was certainly located beside the river, because it is among the people of Nahadû that one sees merchants arriving from upstream[16].

We can thus suppose that the Yûm-hammû settled more on the highlands dominating the course of the river, along the canal.

In this way the two clans would divide the various pasturelands which could have been found at different inhabited levels of the territory.

Hence the sequence "Nahadû, Yûm-hammû, Narâ, Hurrân" would give the distribution of the population between the banks of the Euphrates and the cliff face.

This is important, as Dûr Yahdun-Lîm's region bounds the kingdom at its upstream edge: it is from there that Yahdun-Lîm established his programme of exploiting lands which up to his day (according to him at least) had been left uncultivated. These different settlements thus barred the customary route of the Mâr yamîna Bedouins (the so called Benjaminites) wishing to continue their journey upstream from Samânum (Meyaddin?) and Mišlân (Ramadi) to reach their settlements on the Balikh.

To the south of Dûr Yahdun-Lîm was the Mâr yamîna kingdom of Samânum (Meyaddin?), whose royal family was related to that of Terqa; then Terqa itself, which was a royal city, and then Mišlân (Ramadi), which was a Mâr yamîna city at the time of Zimrî-Lîm; then the royal cities of Appân (Mâr sim'al) and Mari. This gives an idea of the intricated ancient tribal patchwork from the region of the actual Dêr ez-Zôr down to Tell Hariri.

Dûr Yahdun-Lîm was a highly important nerve centre[17], and did not go neglected by the new

14 The exact reading is difficult : Tilla-Zîbim or Till-Azîbim? It is possible to understand Tillâ = "The two Tells" as we have in modern arabic the plural *touloul* for some places. So "The two Tells of the Jackal", but Zîbum may be understood in other ways ; it could be the ancient naming of Thelda, Thillada (= *Tillatu ?) of the Greek.

15 Certainly after the conquest by Zimrî-Lîm of his kingdom, when he gave large amount of land to those who helped him to overthrow Samsî-Addu's dynasty.

16 Ex. gr. *ARM* VIII 78.

17 Nevertheless, if it was really a new royal foundation by Yahdun-Lîm and was ruined by the Mâr yamîna at the beginning of Zimrî-

king of Mari, Yasmah-Addu, after Yahdun-Lîm's defeat: he had it fortified and from then on called it Dûr Yasmah-Addu.

There had always been violent confrontations there between the Mâr yamîna and the Mâr sim'al, under Yahdun-Lîm as well as under Zimrî-Lîm. It is likely that the city was definitely ruined during the Mâr yamîna's great rebellion at the start of the second king's reign, with only its port surviving, presumably because of its strategic importance. After Mari, indeed, Dûr Yahdun-Lîm's site no longer appears in the texts. One can understand this fact very well: the decline of Tuttul, Imâr and Aleppo in the 17th and 16th centuries, at the time of the Hittites' appearance in the North, the formation of the Mitanni state and the start of Assur's rise to greatness, meant that the new kingdom of Hana, the capital of which was no longer at Mari but at Terqa, preferred to direct its strategic efforts towards the Khabur where was founded Dûr Yagîd-Lîm –in a region which was a mere noman's land at Mari's epoch – which was to become Dûr Katlimu (Shēḫ Ḥamad) as the threat from then on appeared to be coming from the North or North-East and no more from the East or North-East.

It is interesting to note that the "Euphrates papyri", published by D. Feissel and J. Gascou between 1995 and 2000 and said to come from the region of Dêr ez-Zôr[18], speak constantly of a city of Theganaba (a name very reminiscent of Gânibatum), but never of Dûr Yahdun-Lîm in any form.

(b) On the other hand, some cities around present-day Halabiye seem still to be referred to in texts (albeit under different names) long after the time of Mari.

1. Here are the toponyms we know upstream of Dûr Yahdun-Lîm:

- right bank (*ahârâtum*)
Halabît, Dunnum (near to which lies Utâh, according to A.3835)
Lasqum

- left bank (*aqdâmâtum*)
ARM XXVI 259: Dunnum is located downstream of Lasqum
A.3835 & A*RM* XXVI 259: Manûhatân
ARM XXVI 259: Muban.

We have a precise indication according to *ARM* XXVI 259 which shows that Manûhatân and Muban are close to Dunnum (of the left bank)[19].

One preliminary question : where was the town of Halabît at the Mari period? Of course, Halabiya and Halabît look alike. We may make the supposition that the two toponyms do belong to the same reality, but it is in no way the proof that we are to dig under the present Halabiya for amorrite Halabît's remains[20]. There is a kind of historical logic : what we look at to-day (Halabiya

Lîm's reign, the town lasted for 30 or at the most 40 years and we cannot expect today a major site as says very confidently Monchambert (*op. cit*., p. 138–139 : "…un site important comme a dû l'être Dûr-Yahdun-Lîm. Il ressort effectivement des textes qu'il s'agissait d'une forteresse importante, ce que confirme le fait qu'elle fut renommée Dûr-Yasmah-Addu… Elle devait être protégée par des remparts, à l'abri desquels…, etc."). More, it would be searched on the upper fields, not along the river sides where are made most of the surveys.

18 Cf. "Documents d'archives romains inédits du Moyen Euphrate. II. Les actes de vente-achat (*P. Euphr*. 6–10)", *Journal des Savants* 1997 pp. 3–57 (in collaboration with J. Gascou and J. Teixidor), esp. pp. 34–37.

19 *mu-ba-a-an*^{ki} *ma-nu-ha-ta-an*^{ki}, *alânu ša itât du-un-nim*^{ki}. The toponyms are surely semitic. Manûhatân means apparently "Resting place" ; it echoes biblical *m^{e}nūḥah* (HAL, p. 568a) and **mānaḥat* (HAL, p. 569b) and designated perhaps the resting place after a difficult road (cf. Dhorme, *L'Ancient Testament* I, p. 1260, n. 52 = "gîte d'étape") ; "Muban" is more difficult to explain, but it could be "Mû-ban(â)" : "The waters of which are of good quality" as we know as well the toponym Eqlum-bana ("The fields of which are of good quality") at the same epoch.

20 Nobody has yet examined the reasons why some antique toponyms may still exist today. We can understand why all toponyms of

and Zelebiya) are the remains of Byzantine towns facing invasions from the South. For Mari's kings the situation was exactly the opposite : military threat was expected from the North : so, we may not be surprised to find casual change for Halabît's situation, according to epochs, and even at the beginning of Hanuqah's pass (upstream), not at its outlet (downstream). This way of reasoning is of course the same for Zelebiye and its Amorrite equivalence.

There were a lot of towns, the size of which are however beyond our scope, around Halabît and its opposite Dunnum ; it is not surprising to find today around Hanuqah's pass many establishments with sherds related to amorrite occupation[21].

d) Mariot toponyms

The essential point is that there seems to be an attestation of a *dunnum* and of *alasqum* on both sides of the Euphrates, and they are close to Halabiye's pass.

d.1) The *lasqum* question

- In *AHw*, s. v., **lasqu(m)** is translated as 'meadow' on the basis of one single example from Mari, where we are told of sheep grazing there. For *AHw* it could be a foreign term, eventually of "western" origin.
- *CAD*, s. v., takes an intermediate position : for Mari's text it maintains the meaning 'meadow', still unique to this occurrence of the word, but it also proposes for assyrian texts the existence of an adjective *lasqu* (meaning unknown) qualifying the word 'mountain'.

Now that the number of examples has grown, it has become clear that Lasqum is the name of a specific place in Mari's texts and all the examples point towards one and single reality.

On what contextual or philological basis can one maintain the existence of a "western" term *lasqum* with the meaning "meadow"? None !

There is absolutely indeed no indication, neither contextual nor from the point of view of the etymology, that *lasqum* (*lašqum*) could mean "meadow"[22]. From the textual evidence on, we can guess it designates a topographical reality and even a very precise one, which is situated in the region of the modern Halabiye, at Mari's epoch upstream from Halabiye and Zelebiye, a reality of both banks.

So, the precise meaning of the ancient term may be: "Sticking", according to arabic *laṣiqa*, *lasiqa*; in other words, *lasqum* indicates the fact that the 2 cliffs, that of the right bank and that of the left one, stick one to the other and create the pass of Hanuqah ("Strangling", that is to say the "narrow part of the river")[23].

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the ancient Djazira were forgotten after the Mongols invasions : human losses were so important that human memory pertaining to this land was wiped off after them : the ancient name of the river which was Hirmaš at Mari's epoch and was called the same at the Arab's epoch, is now Djagdjag, a kurdish one. There are some exceptions : Tell Ṭaban is at the same place that Ṭâbatum and Halabiyah in the region of Halabît. They were not major metropolis, but they were situated at crucial geographical locations and they do mean something apparently. Ṭâbatum had a relation with *ṭâbtum* "salt" and Halabît with *halbum* the meaning of which was apparently "forest " in western semitic. The problem is the same for Aleppo etymology ("Forest Hill", not the place "where (Abraham) milked his cows"). So Halabît must have meant from the outset "the forested Area". Anyway "Halabît's forest" is very well known in Mari's texts. It is possible (but this is a mere suggestion) that local dialects helped a lot to keep up ancient toponymy. But such toponyms are wandering ones and Halabît could jump over the pass and became the name of another city, at the outlet.

21 For a survey in this region, cf. the article by J. L. Montero Fenollos *et al*., «Le projet archéologique "Moyen-Euphrate syrien" : Travaux récents sur la frontière septentrionale du royaume de Mari, available on <http///Studiaorontica.org>.

22 The two dictionaries made their translation from a *single* example according to which sheep were grazing at/on (?) *lasqum*.

23 The one Middle Assyrian example (appearing only in a single context despite its multiple attestations) deserves re-examination: *ištu tul-si-na* [*ù*] kur-*i la-áš-qí berît* ^{uru}*šasila* (NG_1) ^{uru}*Mašhaṭ-šarri* (NG_2) *eberti* íd *Zâbe šupalî*. This comes at the very start of the campaigns of Tukulti-Ninurta I, a point in the text which is full of *hapax legomena*. He leaves Subartu (Šasila) and returns to the

There is indeed a massive geographical formation in the vicinity of Halabiye, whose absence from the texts is notable and which they would be expected to mention. This is the basaltic pass which is crossed by the Euphrates and which still today appears to separate two different worlds: the vast upland region containing the plain of Tuttul (Raqqa), and the narrow valley where the power of Mari was consolidated. It is probable that *Lasqum* is precisely this – the meeting point (cf. Arabic *laṣiqa*, *lasiqa*) of the two cliffs running the length of the valley and known to the Ancients as 'the mountain', kur = *šadûm*.

In the case of the Lesser Zab (cf. n. 23), the text would thus be referring to the Awromān pass, the point at which the streams making up the river come together. The cities of Šasila and *Mašhaṭ-šarrim* ('the Scale of the King') are in the locations of Halabiya and Zelebiye, and the "Tell with Two Horns" must have been a remarkable construction pointing out the pass to travellers.

d.2) The *dunnum* question

The term obviously means 'fortress'.

On arrival in the region of Halabiye, one notices the existence of Zenobia and Zelebiye, which between them protect the course of the Euphrates. The two *dunnum* can be identified with these two structures. At each historical period we may assume that two fortresses were necessary for blocking the river.

Thus, with Ptolemy, we should see these two defensive structures behind the names Birtha and Gadirtha, which are Aramaic forms: *birtha* is the generic term for 'citadel' (= *dunnum*) while Gadirtha is formed on the Semitic root GDR[24], which gave Nabataean *gdr*' 'wall' and hence 'walled plot, walled enclosure'.

The complex is understood as an ensemble which was not split up by the Greek geographer. But, according to his own words, he gives the list of the towns and hamlets *παρα τον Ευφηρατην ποταμον*, and not according to the left or the right banks.

In Isidorus of Charax, Galabatha is a strange form; but at the period in question the letter G was a fricative and could denote, for example, the 'ayin. It is therefore possible that Halabît is represented here: Zelebiye would be so named after the city lying next to it[25].

e) Ancient itineraries

What were the routes through the area at Mari's epoch?

Many people used to pass through these regions, which linked the kingdom with the upstream Euphrates, travelling West in the direction of Imâr and Aleppo, but also travelling East towards Balikh where the Mâr yamîna had substantial settlements.

The most important point to make is that nothing seems to have existed between Dûr Yahdun-Lîm and Halabiye, at least on the right bank. Moreover, in referring to this area Sammetâr uses the term *madbarum*, which properly means "land without towns"[26].

North: this cannot be the same Lasqum as that belonging to Mari. From this point onwards the Mariot structure is clearly named either 'Lasqu' or 'KUR lasqi'. The same structure should be posited on the lower Zab and on the Euphrates.

I propose the following reading for the Middle Assyrian text: *ištu* du_6 $si^{na\text{-}a^{ki}}$ *šadî lasqi berît* NG_1 NG_2 *eberti* íd *Zâbe šupalî* = "From the Tell with Two Horns [= Till Qarnâ(n)] of the "Sticking Mountain" (*šadû lasqu* = at the mountainous Pass between NG_1 and NG_2), on the opposite bank of the lower Zâb."

24 Cf. J. Hoftijzer & K. Jongeling, *Dictionary of the North-West Semitic Inscriptions*, HdO, 1995, I, p. 215.

25 The situation would be the same (in the itineraries) for Giddân instead of the well known Hiddân on the Euphrates downstream from Mari.

26 The text is *ARM* XXVI 14, the most ancient attestation of this term in an akkadian text (no other attestation before Middle Assyrian) ; it is obviously the same as *midbôr* in hebrew. In that langage, the meaning is not only "wilderness" but also "tracts of land, used

In fact, the whole right bank of the Euphrates, upstream of Dûr Yahdun-Lîm, was a highly unstable region, into which people requiring access to water for their flocks tended to descend from the great Western Desert or from the Bishri.

Mâr yamîna people arriving in this area to water their flocks record with great displeasure that the facilities offering them access to water are under the control of the Suteans, the 'People of the South', who arrived before them and settled there[27]. This means that these facilities are not overseen by sedentary people but are at the disposal of whoever arrives first. This is reminiscent of the right to access to wells dug by nomads, which the latter hide before moving on, but whose use by people other than those who dug them is more or less tolerated[28].

The road leading upstream crosses to the left bank as soon as it leaves the kingdom; it does not cross back again to the right bank until Halabiye. This is clear from the route taken by Dâdî-hadun, chief of the Rabbû-tribe, when he wishes to return to Abattum, his city, (Tell Thadayin?) according to *FM* VIII 30, as well as from the route taken by Asqûdum (*ARM* XXVI /1), and many further pieces of evidence.

The left bank is a natural refuge for flocks and herds or people of the right bank as soon as there is a threat coming from the West, the great Desert, or the Bishri. The governors or the local chiefs gave orders to cross the river as soon as there are news about incommers from outside the kingdom.

Conclusion

In the period in question, the area from Dûr Yahdun-Lîm onwards (thus broadly the region of Dêr ez-Zôr) was a focus of recent sedentarization – for which the king Yahdun-Lîm claimed the credit, since he undertook the creation of a canal which eliminated the need to draw water from wells (*dalûm*). Yahdun-Lîm was in fact a latecomer, along with the Mâr sim'al, who descended from the West of Jazira presumably at the time of Ešnunna's attack on the central part of Upper Jazira and the assault on Ašnakkum (probably Chagar Bazar)[29].

In this region he found a moribund kingdom, that of the dynasty of the *Shakkanakku*, which he brought to an end. Today we are unable to say how the Euphrates valley appeared in the IIIrd or even the very early IInd millennium: the Eblaite sources mention only Tuttul, Halabît, Terqa and Mari, but were these merely the most important sites, or the only ones in existence?

When the Mâr sim'al took control of Mari, and no doubt of Terqa at the same time, there were at least three Mâr yamîna kingdoms in the region – Abattum (Tell Thadayin?), Tuttul (Tell Bi'a) and Samânum (Meyaddin?), all along the Euphrates. In the south, Ešnunna extended from Akkad to the gates of Mari. So, the *Shakkanakku* kingdom of Mari had long been shrinking away to nothing,

for the pasturage of flocks and herds" or "uninhabited land". This term fits in with what we know of this region at the epoch of Mari. Dt 32 : 10 equals this term with *tohû*, which describes the primeval chaos, according to *Genesis* i, but this poetic passage may belong to the Jewish urban society for whom being outside a city meant living in nowhere. In akkadian, if the term qualifies eventually *nâbalu* which means "region without water", it may design also a country where there was no (more) town as the Balikh, or the *namû* (steppe) where Bêl-harrân-bêl-usur built a town.

27 A.3605 (letter from Hammî-ištamar) l. 21–34 "Autre chose : des Bédouins (the king speaks of the Mâr yamîna of his tribe, unsettled) qui forment ton *lîmum* (that is to say : " whose tribe is obedient to you") viennent tous de faire la traversée (of the great Desert ; they are coming from the West (Lebanon) till the Kingdom) ; or voilà que des Soutéens se trouvent occuper nos puits et nos fossés d'irrigation (*bu-ra-ti-ni ù a-ra-am-m*[*a*]*-ti-ni*). Aujourd'hui, si mon Seigneur en est d'accord, il faut qu'il parle aux Soutéens pour qu'ils repartent vers l'aval (= the South, [*š*]*a-ap-li-iš li-ra-am-*[*mu-ú*]). C'est la saison de prospérité (*na-ah-mu-um*, that is to say, "spring") et les Bédouins se proposent de s'installer au droit de Samânum (Samânum belonged to the Uprapean tribe whose chief was Hammî-ištamar, sender of this letter). Que mon Seigneur nous fasse cette faveur! Parle aux Soutéens …"

28 One may quote those relevant passages in the Bible : Gen. xxi 25f. and Gen. xxvi 15f.; 18f; 32. The biblical texts refer to wells in an arid country (the Palestinian context), whereas in Mari's texts it is a question of access to water by a river (the Euphratic context).

29 For the story of Yagîd-Lîm and the beginning of Yahdun-Lîm, cf. *Florilegium marianum* XIII, *Les Documents mariotes antérieurs à la babylonisation* (sous presse), "Introduction historique".

and it is possible that in founding Dûr Yahdun-Lîm and digging a canal on the right bank of the Euphrates the new king truly considered himself to be adventuring in a virgin land.

It is difficult to determine what form the kingdom of Samânum took: its capital had high walls, which were brought down by Zimrî-Lîm and no doubt had been destroyed by Yahdun-Lîm before him. But Tuttul and Abattum, its equals at the time, were important cities, or at least the former was.

For Dûr Yahdun-Lîm (or Dûr Yasmah-Addu), we understand that a palatial structure was intended to be built there, as well as at least one temple of Nergal. A great deal of construction work was carried out, and no doubt on a larger scale than elsewhere. However, as is well attested, the city was never the seat of a governor, but only that of a sheikh (*sugâgum*): this is not the case for any of the large cities of the kingdom, Mari, Terqa, or Saggâratum, where one finds not sheikhs but governors, possibly assisted by Elders.

It is therefore interesting to see these regions being crossed by the episodic migrations of the Mâr yamîna (coming from Qaṭna and beyond, from the Lebanon, or going back to Aleppo and beyond, to the Orontus) and being settled by at least two clans of the Mâr sim'al. It is highly likely that these "cities" were small in scope and that the nomad settlements were transitory or still being built up at the time of Mari's destruction by Hammu-rabi of Babylon.

Can we say, at the end of this contribution, that *all* the population of the region was coming from the West and accordingly must be called "Amorrites"? Personally, I don't think so. "Amorrites" is the way we call today "people of Ancient Mesopotamia not originating from the East", at least at the beginning of the IInd millenium. The question of the population of this region is very complex. Amorrites tribes, Mâr yamîna and Mâr sim'al, were going upwards and downwards the Euphrates, the Khabur and the Balikh. It is a fact. The King of Mari, himself, (at least Yahdun-Lîm and Zimrî-Lîm) was a Mâr sim'al and Zimrî-Lîm gave to his allies, the Mâr yamîna, a good deal of his kingdom for their support. But, both Mâr sim'al and Mâr yamina were real brothers, sometimes at war, sometimes at peace.

As a matter of fact the kingdom of Mari was a discontinuous reality with much empty land inside, sometimes out of the royal control. Many other tribes were always trying to penetrate into it, specially because of the Euphrates' water for their flocks. It seems that mount Bishri, the subject of our meeting, was outside the Amorrites tribes field, except for occasionnal grazing. On the other hand, the *Sutû*, "Southerners", "les Soutéens", used to live in the real wilderness of the Great Desert, not as occasionnal travellers[30], and some of their routes were along the Euphrates, but at a few days off the river. It is the way which travellers made use of, in the first millenium after J-C, or at the Arab epoch, when they didnt want to pay taxes to the chiefs of the Euphratean cities.

These Suteans used obviously to go down to the river exactly at the empty place between Dûr Yahdun-Lîm and Halabît, not elsewhere in the Mari Kingdom. The sedentaries and the semi-nomadic

30 It is easy to understand the fact when one knows what kind of booty it was possible to do on attacking the Suteans : I just quote the unpublished A.2200 (forthcoming edition) : "Dis à mon Seigneur : ainsi (parle) Iddin-Annu (maybe a diviner ; he supervised the left bank of the Euphrates during the Mâr yamîna rebellion), ton serviteur.

Les Bédouins (= unsettled Mâr yamîna) qui sont allés pour piller les moutons des Soutéens, ce qui a (déjà) fait l'objet d'un courrier de moi à mon Seigneur, ont pillé les moutons des Soutéens au 'Puits-Froid' et à Qabaqab. Ils (les) ont fait partir et, en aval du mont Bahalta-Gurâtim (= "Lady of the *G.*"), ils sont descendus à l'Euphrate. Ils n'avaient pas encore partagé ces moutons. Ils les ont partagés et ils ont instauré entre eux le partage.

Ils ont pillé ces moutons comme tout loup a tôt fait d'emporter et de partir. C'est Ihîl-pî-El ("Mighty is the speech of God"), fils de Ginnum, l'Uprapéen (Mâr yamîna), le chef de l'expédition, l'allumeur du feu. Cela fait approximativement 10.000 moutons qu'ils ont pris. Les Soutéens sont venus à la rescousse à leur poursuite, mais (etc.)…"

Other texts speak no more about flocks, but about herds (many hundreds of cattle). The fact that there were many hundreds of cattle in the Suteans' encampments is an important fact and may reveal that they were also peasants whose hamlets were outside the kingdom. We are always speaking about sheep when we are considering nomadism, but cattle used to be sent faraway as well for grazing.

pastoral populations of the kingdom used then to drive their flocks and herds, as well as the population, to the other side, the left one ; beyond Dûr Yahdun-Lîm, for safety, they used to take the left bank.

So, for my part, the real and permanent Bishri population must have been Sutean, not Amorrite, and much of the archeological remains of those regions might be explained as tokens of Sutean occupation. At least for the Mari period.

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