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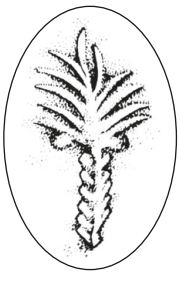

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SOMMARIO

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EXPLORING ALTERNATIVE SURVEY METHODS IN NORTHERN MESOPOTAMIA

THE CASE OF THE NAVKUR PLAIN AND THE APPLICATION OF A MULTI-SOURCE APPROACH (MSA) FOR DETECTING ANTHROPOGENIC EVIDENCE THROUGH REMOTE SENSING

Abstract

Northern Mesopotamia has been the focus of numerous archaeological surveys employing a variety of techniques to more precisely identify ancient settlements and sites. A significant advancement in survey methodologies has been the integration of aerial and, later, satellite imagery among the sources of information that have facilitated and accelerated the identification of a growing number of potential archaeological sites. In recent years, a new range of digital data has attracted the interest of archaeologists due to its potential to detect traces of ancient anthropogenic soils. This article presents a first application of such imagery for the identification of archaeological sites in selected areas of the Navkur plain, where surveys have been conducted using more traditional methods. This approach allows for a preliminary assessment of the usefulness of these data sources through the verification of previously unidentified positive or negative sites. At the same time, information on the type, function, and chronology of the archaeological evidence will be provided, offering an initial insight into the potential of this technique for refining settlement models across different historical periods.

Keywords

Northern Mesopotamia, archaeological survey, material culture, settlement models

1. Introduction: state of research and the area of Navkur and Ba'adre as case study (M. Iamoni)

Survey investigations represent a valuable source of information for defining regional settlement models, providing crucial evidence for exploring various societal and economic aspects in archaeological research. These include contact networks at different scales, the emergence of specific forms of coexistence, and patterns of social organization. In recent decades, SW Asia – particularly ancient Mesopotamia – has emerged as a privileged case study, largely due to the opportunity to conduct archaeological surveys over vast areas. These territories are especially well-suited to such investigations thanks to their relatively flat topography and the continuous occupation of specific areas, which led to the formation of characteristic *tells* – anthropogenic mounds consisting of superimposed settlement layers.

Early archaeological efforts focused primarily on central and southern Mesopotamia due to their relevance in studying the so-called "Urban Revolution".[1] The successful outcomes of these projects encouraged archaeologists to expand their investigations into other parts of Mesopotamia, particularly the northern regions. These areas are especially significant for understanding key episodes in human history, such as the emergence of the first permanent settlements – considered one of the major outcomes of the so-called Neolithic Revolution.[2] The North Jazira Project (NJP) marked a significant turning point thanks to its groundbreaking results.[3] In the wake of NJP, an increasing number of regional projects began to survey the Euphrates and its tributaries more systematically and intensively, leading to the accumulation of a substantial body of data. In recent years, the diverse landscape of NE Mesopotamia – largely corresponding to the Kurdish Autonomous Region of northern Iraq – has become the focus of many regional archaeological investigations. Projects such as the Eastern Ḫabur Archaeological Project (EHAP),[4] the Land of Nineveh Archaeological Project (LoNAP),[5] the Upper Greater Zab Archaeological Reconnaissance Project (UGZAR),[6] and the Erbil Plain Archaeological Survey (EPAS)[7] have led to the identification of hundreds of previously unknown settlements dating from the beginning of the Holocene.

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[1] Childe 1950; Adams 1965; 1981; Adams, Nissen 1972.

[2] Braidwood, Howe 1960; Braidwood *et alii* 1983; Iamoni, Baldi 2023.

[3] Wilkinson, Tucker 1995.

[4] Pfälzner, Sconzo 2016.

[5] Morandi Bonacossi, Iamoni 2015.

[6] Koliński 2019; 2020a; 2020b; 2022.

[7] Ur *et alii* 2021.

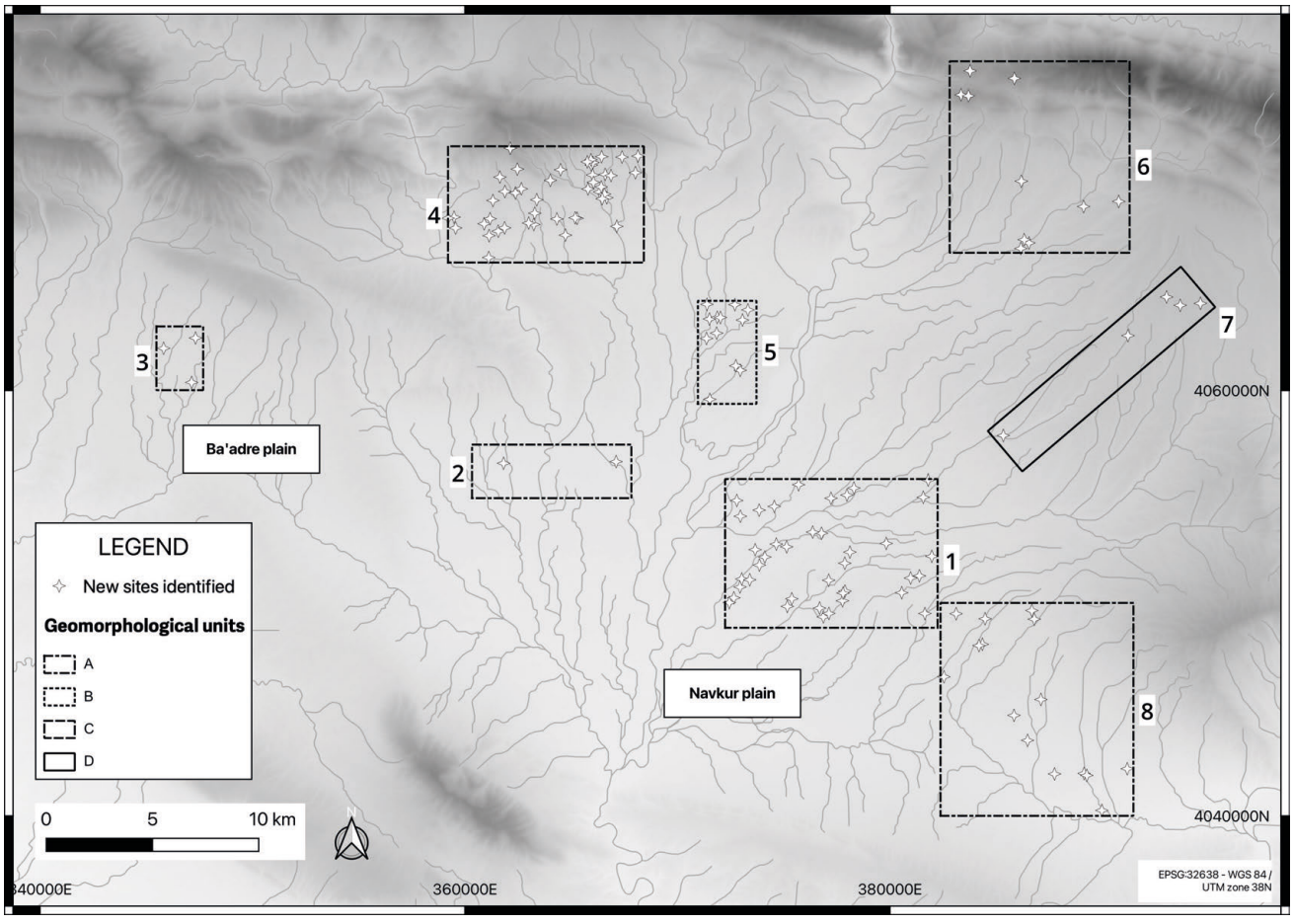

Fig. 1 - Survey test areas and new sites identified.

The widespread use of aerial and satellite imagery[8] – particularly declassified sources such as Corona images[9] – combined with both intensive and extensive survey techniques,[10] has greatly enhanced the ability to identify archaeological sites and reduced the time required to reconstruct ancient landscapes. More recently, the analysis of multispectral imagery has become increasingly integrated into regional investigations.[11]

However, the level of precision offered by these techniques in the Mesopotamian landscape – especially within the varied environments of northern Iraqi Kurdistan – remains an open question. Among the most challenging tasks for archaeological surveys is the identification of faint traces, such as small, short-lived settlements, which often exhibit very low surface visibility. These sites can remain "invisible" in the archaeological landscape and through extremely intensive and time-consuming fieldwork. This limitation results in a biased picture of ancient settlement patterns – one that the adoption of new methods, adequately tested in specific regional contexts, may help to address.

Within the framework of the Asingeran Excavation Project (AEP), a small team sought to address this issue by developing a dedicated remote sensing approach (discussed below) and validating it through fieldwork. To this end, eight target areas (Fig. 1) were defined and surveyed in the Navkur and Ba'adre regions – fertile plains located between the Erbil province and the Tigris River.[12] Both areas offer the environmental diversity necessary to test new survey methods across different contexts. Moreover, previous extensive surveys conducted in these regions have already demonstrated a significant settlement history, spanning from the earliest phases of permanent human occupation – i.e., the Pottery Neolithic – to the late Ottoman period.[13]

This article presents and interprets the results of the project, with particular emphasis on the typology and chronology of the identified archaeological evi-

[8] Wilkinson 2000.
[9] Ur 2013.
[10] Wilkinson 2003, 33-36.
[11] Menze, Ur 2012; Calleja *et alii* 2018; Salgado Carmona *et alii* 2020.
[12] Morandi Bonacossi *et alii* 2018; Iamoni *et alii* 2023.
[13] Morandi Bonacossi, Iamoni 2015, 15; Koliński 2019; 2020b.

Luca Peyronel - Valentina Oselini - Rocco Palermo - Agnese Vacca*

THE ALIAWA SURVEY: PRELIMINARY RESULTS FROM A MULTI-PERIOD SITE IN THE KURDISTAN REGION OF IRAQ

Abstract

This paper presents the results of an extensive fieldwalking survey carried out at the site of Aliawa, located in the Erbil plain (Kurdistan Region of Iraq). The investigation, conducted by the University of Milan within the framework of the MAIPE (Italian Archaeological Expedition in the Erbil Plain), aimed to document the site's spatial organization and reconstruct its occupational history. The study outlines the methodology adopted for surface collection and recording, and discusses the analytical approach applied to the ceramic assemblages. By integrating typological and spatial data, it has been possible to identify a long-term and complex sequence of occupation, spanning from the 6th millennium BCE to the late Islamic period. The results not only contribute to a better understanding of Aliawa's developmental trajectory but also provide new insights into settlement dynamics in the Erbil plain and their relation to wider regional networks of northern Mesopotamia.

Keywords

Aliawa, Erbil plain, Iraqi Kurdistan, archaeological survey, settlement history, landscape archaeology

1. Aliawa and its Environment[1]

The archaeological site of Aliawa is located on the southern bank of the Chai Kurdara, a river flowing to the west into the Upper Zab in the Shemamok district, about 26 km south-west from the citadel of Hawler/Erbil in the Kurdistan region of Iraq. It was first remotely identified through the use of declassified satellite imagery (e.g. CORONA) by the Erbil Plain Archaeological Survey (EPAS) – a project carried out since 2012 by Harvard University in the central sector of the Erbil governorate[2] – and is investigated by the MAIPE (Italian Archaeological Expedition in the Erbil Plain) of the University of Milan since 2015 (Fig. 1).[3]

The site has an articulated conformation, resulting from anthropogenic and natural events, with a prominent mound of ca. 2.2 ha and 25 m high, and extended low hills to the south, west and east, reaching a maximum extension of 25 ha (Figs 2-3).

The high mound has steep slopes on the northwestern, northern and eastern sides (50% gradient), while a wide gully runs from the top of the mound to its bottom on the southern slope. The eastern and western sides of the gully create gentler slopes (13%), and its central part, with a maximum elevation of ca. 341 m a.s.l., is the area where the most significant number of archaeological materials (potsherds, terracotta objects and lithic tools and flakes) has accumulated during millennia (Fig. 4).

The geo-archaeological investigations carried out in 2019 by the Italian Archaeological Expedition in the Erbil Plain (MAIPE) from the University of Milan confirmed that four low hills to the south-west, south and east, were the result of anthropic occupation reaching an extension of ca. 25 ha.[4] The northern limit of the site is marked by a meander of a watercourse belonging to the Kurdara river system, while the western and southern limits can be identified by the presence of a seasonal stream. A depressed area to the east of the main mound may indicate the remnant of a waterlogged zone, possibly formed as a result of shifts in the nearby watercourse over time. Moreover, beginning at the south-eastern edge of the lower town, a broad topographic depression (approximately 15 m wide) can be traced running towards the site of Kurd Qaburstan, located about 6 km away. This deep and broad feature, firstly identified by the EPAS and carefully inspected by MAIPE, clearly suggests a connection between the two settlements, even though its precise date of construction and use remains undetermined.[5] Geo-archaeological investigations of this landscape feature in its south-eastern most part were carried out in 2022, through the excavation of a transversal trench and the collection of samples from the accumulation layers inside the depression for micro-

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[1] The article is the product of a joint work carried out by the authors in the field, performing pedestrian survey and materials collection and study. GIS elaboration, distribution analysis and maps have been carried out by V. Oselini. L. Peyronel wrote §§1, 3.7, V. Oselini §§3.3, 3.4, 3.5, R. Palermo §3.6, while A. Vacca dealt with §§3.1, 3.2. Sections 2 and 4 were written jointly.

[2] Ur 2017. Remote identification and satellite imagery analyses were a critical part of EPAS methodology, as illustrated in Ur *et alii* 2013; 2021; Ur, Blossom 2019; Palermo, de Jong, Ur 2022.

[3] Peyronel, Vacca 2020b.

[4] *Ibidem*; Forti *et alii* 2023.

[5] Ur *et alii* 2021, 34.

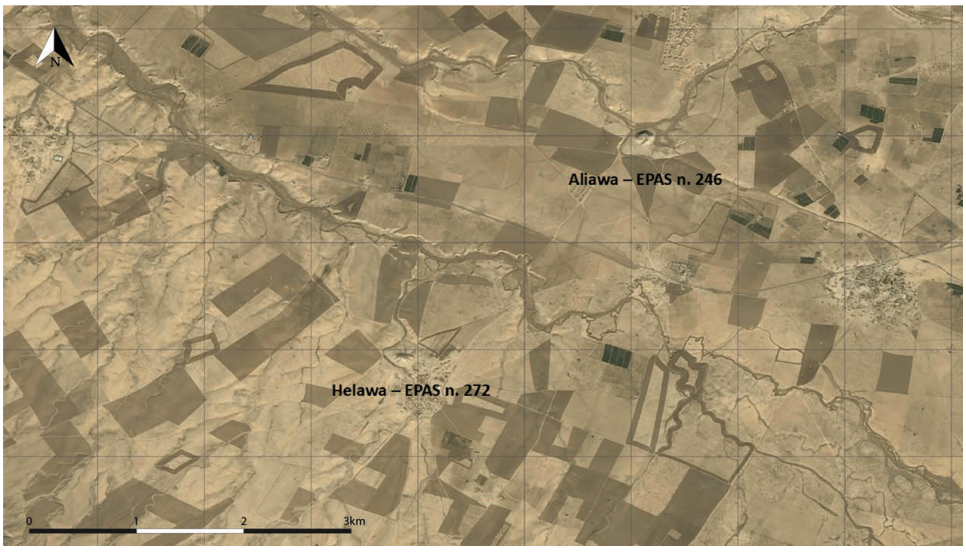

Fig. 1 - Satellite image of the south-western Erbil plain with indication of Helawa and Aliawa. Base map Corona (1104-2138F006, 6th August 1968) and GoogleEarth™ (2015) satellite images.

Fig. 2 - Drone view of the site of Aliawa.

Fig. 3 - Aliawa. View of the mound from the east.

Karen Radner - Daniel T. Potts - Andrea Squitieri - Jean-Jacques Herr
Carolyne Douché - Cajetan Geiger - Alessio Palmisano - Jens Rohde*

GIRD-I ROSTAM IN IRAQI KURDISTAN, 2019 AND 2022

PRELIMINARY RESULTS OF THE SECOND AND THIRD SEASONS OF EXCAVATIONS AND OF THE GEOLOGICAL SURVEY, WITH NOTES ON THE RADIOCARBON DATES, THE PALAEOBOTANICAL REMAINS, THREE AMLASH-STYLE ANTHROPOMORPHIC FIGURINES AND A POSSIBLE OLD ARAMAIC OSTRACON[1]

Abstract

The archaeological site of Gird-i Rostam, located in the easternmost part of Iraq's Sulaymaniyah Governorate, has been subject to excavations since 2018, with a joint Kurdish-German-American team conducting three seasons of fieldwork, interrupted by the Covid-19 pandemic. The 2019 and 2022 seasons yielded significant findings, shedding further light on the site's architecture and material culture. Geological fieldwork undertaken in 2019 aimed to enhance understanding of the site's environs, particularly concerning mineral deposits and resource exploitation. The excavations revealed a large wall with buttresses belonging to a massive fortification with a paved entrance that led to a gate chamber whose us can be dated to the Bronze/Iron Ages. Above this structure, a brick-paved floor with a cooking installation was unearthed, dated to the Parthian/Sasanian period. The Late Chalcolithic levels first exposed in 2018 were further investigated. Finds include a possible Old Aramaic ostracon and anthropomorphic terracotta figurines of an Early Iron Age type connected to the South Caspian site of Amlash. The analysis of palaeobotanical remains gained from flotation indicates the dominance of wheat as a cereal crop, with barley playing a minor role, suggesting a distinct plant economy when compared to other sites in northern Iraq. The evidence for water-demanding crops and the site's proximity to the Shalair River point to favourable conditions for agriculture, at Gird-i Rostam.

Keywords

Gird-i Rostam (Iraq), Zagros mountains, Late Chalcolithic, Early Iron Age, Sasanian period

Introduction

The archaeological site of Gird-i Rostam (also Gird-e Rūstam) is located near the village of Bistan in the Penjwin district of the easternmost part of the Sulaymaniyah Governorate in the Kurdish Autonomous Region of Iraq (unprojected LatLon coordinate system, WGS84 datum E 45.915, N 35.753), directly on the border with Iran. Situated on the southern bank of the Shalair River (also Shalar or Shiller, in Kurdish: Cham-e Tatan), a tributary of the Lower Zab, it is the largest site in the Dasht-i Bazargan plain. The settlement mound covers a surface of about 1.5-2 ha and rises to a height of ca. 15 m, at an average elevation of around 1200 m above sea level (Fig. 1).

After the initial mapping of the site in 2017, a joint Kurdish-German-American team with members of the Sulaymaniyah Directorate of Antiquities and Heritage, the Ludwig-Maximilians-Universität München (LMU Munich) and the Institute for the Study of the Ancient World at New York University (ISAW) worked there under the direction of Daniel T. Potts and Karen Radner for three seasons of excavation in the years 2018, 2019, and 2022, with funding provided by the two universities as well as the Gerda Henkel Foundation (Düsseldorf, Germany).[2] The team is closely connected to the Peshdar Plain Project, co-directed by Karen Radner, and includes

* K. Radner, D.T. Potts (Institute for the Study of the Ancient World, New York University); A. Squitieri, J.-J. Herr, C. Geiger, J. Rohde (History Department, Ludwig-Maximilians-University Munich); Carolyne Douché (Institute of Archaeology, Oxford University); Alessio Palmisano (Department of Historical Studies, University of Turin).

[1] Andrea Squitieri assembled the draft manuscript from the individual contributions while Karen Radner and Daniel T. Potts supervised the original research and the writing process. Radner and Potts wrote the paper's introduction and conclusion, and Radner also drafted the section on the possible Aramaic ostracon, based on a first assessment by Holger Gzella (LMU Munich). Jean-Jacques Herr, Alessio Palmisano, and Jens Rohde drafted the excavation sections, which were then edited by Squitieri. Herr also contributed the pottery section, and Squitieri the excavation overview and the small find section. Carolyne Douché wrote the palaeobotanical section, and Cajetan Geiger drafted the section on the geological fieldwork. Radner and Squitieri edited the complete article and revised it together with Potts.

[2] Gerda Henkel Foundation grant numbers AZ 64/V/17: "Ausgrabung in Gird-i Rostam: Datenbank und digitale Dokumentation," and AZ 05/V/20: "Excavating the Iron Age fortress of Gird-i Rostam (Penjwin District, Kurdish Autonomous Region of Iraq)." NYU participation was funded by the Institute for the Study of the Ancient World. Jean-Jacques Herr joined

Fig. 1 - The site of Gird-i Rostam in the Dasht-i Bazargan plain, view from the East. The inset map shows the site's location in the Penjwin region.

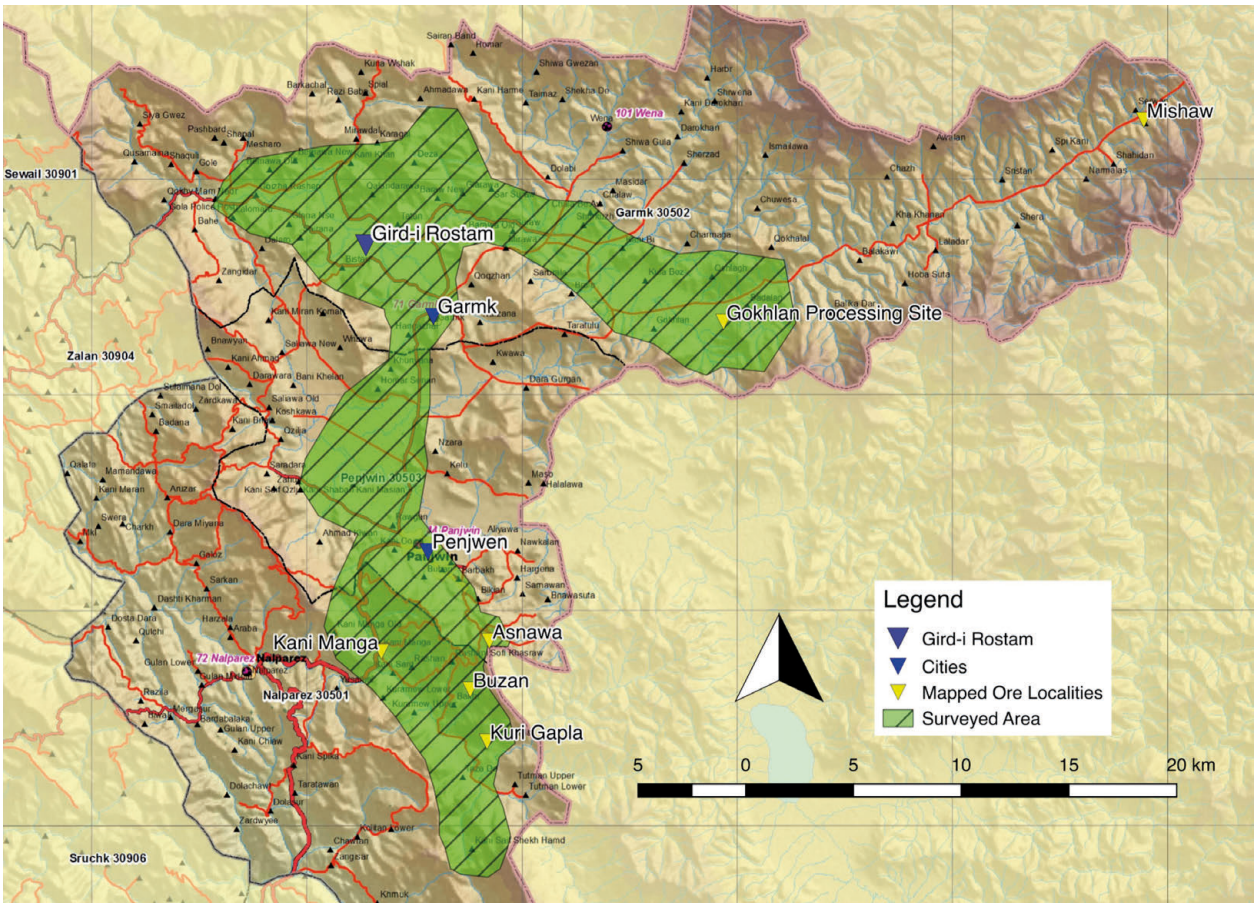

Fig. 2 - Area surveyed during the field season in July 2019. The identified ore locations are marked in relation to the nearest topographical locations for better orientation.

Oğuz Soysal*

NOMINALKOMPOSITA IM HATTISCHEN UND IHRE WIDERSPIEGELUNG IN DEN ALTANATOLISCHEN EIGENNAMEN DER HETHITERZEIT**

Abstract

The scarce written sources of Hattian reveal that this language knew two basic types of nominal compounds: **noun$_1$ + noun$_2$** and **adjective + noun**. The number of examples may increase if one takes into consideration the Hattian elements as found in Ancient Anatolian divine proper names in Hittite tradition. Besides these basic types, there are compound names which can be analysed as variants of type **noun$_1$ + noun$_2$** with additional Hattian case endings and morphemes: **noun$_1$ (genitive *=n*) + noun$_2$**, and **noun$_1$ (genitive *=n*) + possessive (*te=*/*le=*) + noun$_2$** (so-called *genitivus possessivus*) and, as a light variant of the latter, namely **noun$_1$ (without genitive *=n*) + possessive (*te=*/*le=*) + noun$_2$**. In some instances, the Hattian conjunction *pala* "and" forms part of the compound. To this latter kind of expanded formations belong to the "fictive" compound divine names or designations, which most likely are altogether the product of the Post-Hattian periods. In addition to those above, a new interpretation of some geographical names as compounds with various Hattian imperative forms in word initial position followed by the noun *š*(*a*)*ḫap* "god" would suggest another kind of Hattian compound nouns, namely **imperative + noun**.

Keywords

Hattian, Hattian tradition in Hittite, nominal compounds, compound proper names

Inhaltsübersicht

I. Nominalkomposita im Hattischen

Im Zuge der Erschließung des Hattischen verfestigte sich langsam die Erkenntnis, es handele sich hierbei um eine an Nominalkomposita reiche Sprache. Bis heute bildet die Nominalkomposition trotz

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** Die vorliegende Studie wurde im November - Dezember 2017 verfasst und im Februar 2025 aufgrund neuerer wissenschaftlichen Publikationen leicht revidiert. Der Autor ist Herrn Roman Gundacker für eine gründliche Durchsicht und stilistische Revision des deutschen Textes zum Dank verpflichtet. Aus Raumgründen können in diesem Beitrag verwendetes Textmaterial, lexikalische und grammatikalische Kenntnisse des Hattischen nicht immer vollständig zitiert, *in extendo* diskutiert oder mit allen wünschenwerten bibliographischen Angaben versehen werden, wofür pauschal auf Soysal 2004b verwiesen sei.

der durchwegs dürftigen Kenntnisse des Hattischen wohl einen der wichtigsten Teile der Grammatik dieser Sprache. Dies ist nicht nur dem erhaltenen hattischen Sprachmaterial, sondern auch einer Reihe von Elementen des Onomastikons, Theonomastikons sowie der Toponomastik Altanatoliens in der Tradition der hethitischen Überlieferung zu verdanken. Dabei sind sowohl unmittelbare hattische Entlehnungen im Hethitischen als auch auf hattische Vorbilder zurückgehende Neubildungen fassbar.

Die heute noch gebräuchliche Kategorisierung hattischer Nominalkomposita geht im Kern auf die Arbeiten von Kammenhuber[1] zurück, die das Verständnis für lange Zeit prägte. Seit ihrer Arbeit konnten jedoch wichtige Fortschritte erzielt werden, die nachstehend zusammengefasst und weitergeführt werden sollen. Eine Zusammenfassung des Forschungsstandes zu den hattischen Nominalkomposita vor etwa 20 Jahren bietet die Sammlung hattischen Sprachgutes in hethitischer Textüberlieferung:[2]

Komposita lassen sich haupsächlich in zwei Formen gestalten, und die häufigste davon ist die Bildungsweise "Nomen + Nomen", die bei den Berufsbezeichnungen *ziḫar-tail* "Holz-Meister (= Tischler)", **ḫuzza(n)-šail* "Herd-Meister (= Schmied)", aber auch beim Epitheton *wu$_u$r(un)-šail* "Land(es)-Herr" erscheint. Auch die Götternamen ^{d}*Wu$_u$run-katte* "Landes-König", ^{d}*Katte-šḫapi* "König-Gott", ^{d}*Taḫurp(an)-ištanu* "Sonnengottheit von Taḫurpa" gehören zur gleichen Kategorie. Wenn sie auch nicht als sicher gelten können, sind hierzu auch die Bildungen *we$_e$l-kammama* "Kammama (des) Haus(es)" und *pel-wa$_a$ḫiši* "Wa$_a$ḫiši (des) Haus(es)", womit wohl die häuslichen Gottheiten gemeint sind, zu nennen. Eine weitere Bildungsweise des Kompositums ist "Adjektiv + Nomen", die insbesondere bei den Bezeichnungen der Gegenstände vorliegt: *tittaḫ-zilat* "großer-Stuhl (d. i. Thron)", *tete-kuzzan* "großer-Herd (d. i. Schmelzofen)", *ḫun-zinar* "großes[?]-Musik(instrument)", *ippi-zinar* "kleines[?]-Musik(instrument)". Hinzu käme noch der Göttername ^{d}*Tete-šḫapi* "große-Göttin".

Vom damaligen Wissenstand ausgehend soll die strukturelle Typologie der hattischen Nominalkomposita erweitert und verfeinert sowie eine Reihe wichtiger Ergänzungen beigesteuert werden. Bei dieser Gelegenheit wird zugleich angestrebt, die neuen Belege aus den hattischen Textcorpora aus Boğazköy und Ortaköy zugänglich zu machen und darauf aufbauend weitergehende sprachwissenschaftliche Ergebnisse zu vermitteln.

1) Für die Nominalkomposita des Typus **Nomen$_1$ + Nomen$_2$** dürfte insofern gegenüber bisherigen Darstellungen eine Präzisierung angebracht sein, da wahrscheinlich das erste Element durchgehend im Genitiv steht und somit den Besitzer (*possessor*) bezeichnet (d. h. **Nomen$_1$ (Gen. ≠*n*) + Nomen$_2$**), auch wenn die Kasusendung *≠n* meistens nicht Teil der Bildung ist. Demzufolge bedeutet ^{d}*Katte-šḫapi* nicht "König-Gott",[3] sondern "(des) König(s) Gott". Diese Deutung ist in allen Fällen möglich, in vielen sogar zwingend wie etwa ^{d}*Katti-mu* "(des) König(s) Mutter". Eine einfache Auflösung, etwa "König-Mutter", wäre hier semantisch ungereimt, wenn nicht gar unsinnig. Unterstützend kann auch eine weitere Bildungsart ^{d}*Katte-li-kamamma* "(des) König(s), seine Gottheit Kammama"[4] herangezogen werden, die mittels des zusätzlich auftretenden Possessivmarkers *le≠/li≠* "sein (m.)" eindeutig ein genitivisches (possessives) Verhältnis zum Ausdruck bringt. Dem Typus **Nomen$_1$ (Gen. ≠*n*) + Nomen$_2$** gehören letztlich auch die bekannten Götternamen des hattischen Pantheons ^{d}*Wu$_u$r-un-katte* "des Landes König" und ^{d}*Šul-(i)n-katte* "des *šul*(*i*) König" an. Die ohne Obliquusendung (*≠n*) (oder phonetisch angesehen einfach mit einem Nasalschwund) gebildeten einfachen Nominalkomposita mit dem hattischen Wort *wu$_u$r* "Land" sind recht häufig. Hierher gehören unter anderem: *wu$_u$r≠u≠mu* "des Land(es)-Mutter" (KUB 1.17 I 24) und *wu$_u$r≠u≠ḫuwa$_a$ši(≠)wa$_a$* "des Land(es)-*ḫuwa$_a$ši*(*wa$_a$*)" (KBo 23.97 Rs. 11'). Im zuletzt angeführten Beispiel erinnert das zweite Element des Kompositums sehr stark an das in hethitischen Texten belegte ^{NA4}*ḫuwaši-* (ein steinernes Kultobjekt). Ebenfalls in hethitischem Kontext zu finden ist folgender hattische Zuruf: *puru-šael* (➔*pur≠u(n)≠šael*) "(O du) Land(es)-Herr!"[5] (KUB 36.89 Vs. 10). Dieses Kompositum bildet eines der Attribute des Wettergottes, womöglich ist es auch das Vorbild des Personennamens Muršili.[6] Die original-hattische Form dafür möchte man mit dem Beleg *wu$_u$r(≠)šai*[*l*] (KUB 28.60 Rs. lk. Kol. 5') identifizieren, wobei das Vorderglied des Kompositums in nackter Stammform ohne Obliquusendung *≠n* steht.

In der bilingualen Liste der Hofbeamten in KBo 5.11 findet sich neben zwei semantisch deutbaren, aber in ihren Bestandteilen nicht sicher bestimmbaren **Nomen$_1$ + Nomen$_2$** Bildungen ^{LÚ}*wi$_i$ndu-karam* "Weinschenk" (= Logogramm ^{LÚ}SAGI; I 8)[7] und ^{LÚ}*ḫanti-pšuwa$_a$* (oder ^{LÚ}*ḫantip-šuwa$_a$*) "Koch" (= Logogramm ^{LÚ}MUḪALDIM; I 10) ein weiteres Nominalkomposi-

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[1] Kammenhuber 1959, 72-79; 1961, 201-210; 1969, 452, 495-498.

[2] Soysal 2004b, 181-182.

[3] Wie im Abschnitt I (Zitat in Kleinschrift) weiter oben aufgeführt wird.

[4] Siehe Abschnitt I.4.B weiter unten.

[5] Das hattische Wort *šail* (mit mehreren Graphievarianten *šael*, *šil*, *tail*, *zil*[?]) "Herr, Meister" tritt auch bei den Götternamen Tuḫa-šail und Tupḫa-šail auf (van Gessel 1998, 523-524; van Gessel 2001, 341); Taḫa-ša(i)li ist zudem in Kültepe als Anthroponym öfters belegt (kt c/k 47:1; c/k 50:2; c/k 90:1 usw.). Die sprachwirklichen Formen dieser Wörter sind in hattischen Kontext als *ta-a-ḫa-ša-i-li*(*-ma*) und *tu-u-ḫa-a-ša-i-li* notiert (KUB 28.20 Vs.[?] r. Kol. 1 bzw. KBo 19.161 IV 17'). Zum Tu(p)ḫa-šail cf. neuerdings Soysal 2020, 133, 136.

[6] Cf. Abschnitt II.1 (sub Muršili) weiter unten.

[7] Auch belegt in der Schreibung *pint*[*u-ga*]*ram* in KBo 37.1 I 43.

Virginia Pelissero - Angela Pietrafesa*

NEW ARCHIVAL INSIGHTS FROM THE CRAST NIMRUD SURVEY (1987-1989)
A PRELIMINARY REPORT ON POTTERY AND TOPOGRAPHY

Abstract

The aim of this paper is to present new archival insights from the CRAST Nimrud survey (1987-1989). Our approach reconsiders both topographic data and the entire pottery assemblage collected, with the aim of examining its internal consistency and chronological reliability. The study describes the subdivision of the pottery into distinct classes and examines the proposed chronology through comparison with published material. By doing so, it investigates the difficulty of working with legacy survey data, which often present challenges due to inconsistent recording, and extends the discussion to the broader interpretative potential of the corpus. This contribution therefore considers and contextualizes the material in order to provide a more solid basis for future research.

Keywords

Nimrud, archaeological survey, pottery, archival records, Assyrian Empire

1. Introduction

The city of Nimrud (ancient Kalḫu), located about 35 km south of modern Mosul and erected as capital of the Neo-Assyrian Empire and royal residence by King Ashurnasirpal II, has long attracted the attention of scholars worldwide (Fig. 1). In line with the typical pattern of urban arrangement known in Neo-Assyrian capitals,[1] there is a clear-cut topographical separation between the so-called Citadel and the Lower Town of Nimrud, whose internal arrangement is still largely unknown. While the monumental complexes of the Citadel have been extensively investigated,[2] the urban design of the Lower Town suffers from a shortage of data and studies, in line with the general tendency of past scholars not investigating "non-elite" quarters of Assyrian centres.[3]

Several past archaeological expeditions focused on Fort Shalmaneser, the military complex built by the eponymous king and identified as a key node in the fortification system of the city. However, aside from the investigation of this monumental building, the rest of the Lower Town has largely been neglected. Among the attempts to outline its architectural layout, the project undertaken by the CRAST team (1987-1989) under the direction of Paolo Fiorina stands out, although it was unfortunately interrupted by the outbreak of war and never completed. Fiorina designed a survey based on the comparison of soil morphology (via topographic measurements) with an extensive collection of ceramic surface finds. The aim of the research was to highlight the urban layout, including its entrances, road network, and associated open spaces. The plan was to conduct a survey of the area

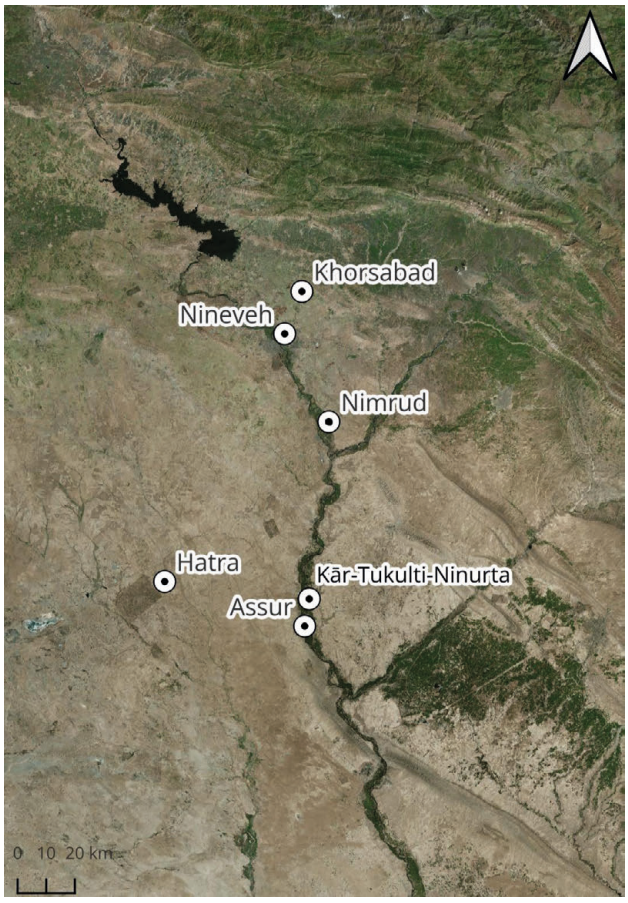

Fig. 1 - Nimrud and its surrounding area (QGIS, 2025).

* Virginia Pelissero and Angela Pietrafesa (University of Turin). Author Contributions: V.P. was responsible for the Introduction, Topographic survey, Discussion, and Conclusions. A.P. conducted the Pottery collection analysis and contributed to the Discussion. All authors drafted the manuscript and approved the final version.

[1] Reade 2011, 113.

[2] Mallowan 1966; Oates, Oates 2001.

[3] Ur 2013a, 11.

in order to understand the urban organization and periods of occupation, providing a basis for targeted archaeological investigations.[4]

The interruption of fieldwork was not followed by the analysis and subsequent publication of the collected evidence. Apart from Lippolis and Masturzo, who published the digitization of the contour lines hand-drawn by the CRAST topographers,[5] it is worth mentioning a general lack of research regarding the data gathered during the survey. Despite the incompleteness of the initial project, the absence of a final publication is a major limitation, especially for a little-known context such as the one under discussion. Hence, this study seeks to obtain new results derived from archival records, which will help to address these research gaps.

When setting the research questions underlying this study, in line with the dual nature (topographic and ceramic) of the project described above, it was decided to conduct a parallel evaluation of the two research lines. Aside from the partial discussion of the topographic data,[6] the major objective of this study was to analyse, describe, and contextualize the pottery assemblage recovered.

There are two primary aims of this study. The first is to distinguish within the collected corpus the Neo-Assyrian potsherds, in order to understand the occupation of the Lower Town and, in particular, its potential reoccupation after the collapse of the Neo-Assyrian Empire. Through a detailed analysis of shape, fabric, and surface treatment, we aim to confirm or refute preliminary settlement hypotheses advanced by the Turin team. The second objective is to verify the attribution of the recognized forms to the main reference pottery typologies produced for contemporary and pertinent sites by seeking comparative examples. Drawing upon two strands of research focussing on topography and pottery, this study attempts to retrieve the maximum possible information from dated archival records that have been neglected.

The paper has been organised into five main sections, including this introductory paragraph. The next section begins by illustrating the methods applied to collect topographic data and examines how to integrate them into a dynamic digital environment to perform infra-site territorial analyses. The third paragraph focuses on the pottery assemblage: following a necessary preliminary discussion outlining the challenges posed by the initial data, it proceeds with the description of the five identified classes (Common, Red Slip, Glazed, Palace, and Cooking Ware). The fourth section presents a discussion of the results obtained, tying together the various strands of the research to highlight critical issues, strengths, and implications of the findings for future research in the area. Finally, the conclusions offer a summary of the points addressed in the individual sections.

2. Topographic survey

Methodological Framework

Compared to the original project, unfortunately the CRAST topographic survey remained incomplete, leaving most of the southern sector and a large central portion unexplored. The topographic survey, which produced the contour map (Fig. 2),[7] has covered approximately 230 hectares, whereas the ceramic survey extended over only about one hundred hectares, restricted to part of the northern sector and the area immediately surrounding Fort Shalmaneser. A preliminary assessment of elevation within the settlement made Fiorina propose a mapping of urban gates and internal roads, and the possible locations of squares and gardens.[8] Although Fiorina's plan remains the most comprehensive reconstruction of the city's internal layout produced to date, it nonetheless presents several shortcomings as historical and contemporary digital imagery was not accessible at the time of the survey.

Results

The topographic measurements acquired between 1987 and 1989[9] were integrated into a GIS environment in order to carry out more complex analyses through the use of digital imagery to detect ground anomalies. A discussion of the comparison between the results of the digital reprocessing of the elevation data and the historical aerial and satellite imagery lies beyond the scope of this study.[10] In this paper, only the results of the reassessment of the collected topographic data will be presented, as they contribute to the contextualization of the ceramic corpus.

The previously mentioned contour lines were georeferenced in a QGIS project, and their relative elevations were converted into absolute values, with the 34-meter relative contour corresponding to 200

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[4] Fiorina 2011, 127.

[5] Lippolis, Masturzo 2012.

[6] The analysis of these data is the core of the conference talk "Renewed approaches to Nimrud. Reassessment and digitisation of CRAST survey data (1987-1989)" by Virginia Pelissero at the 14th ICAANE in Lyon (2–7th June 2025) and will therefore be included in the corresponding proceedings.

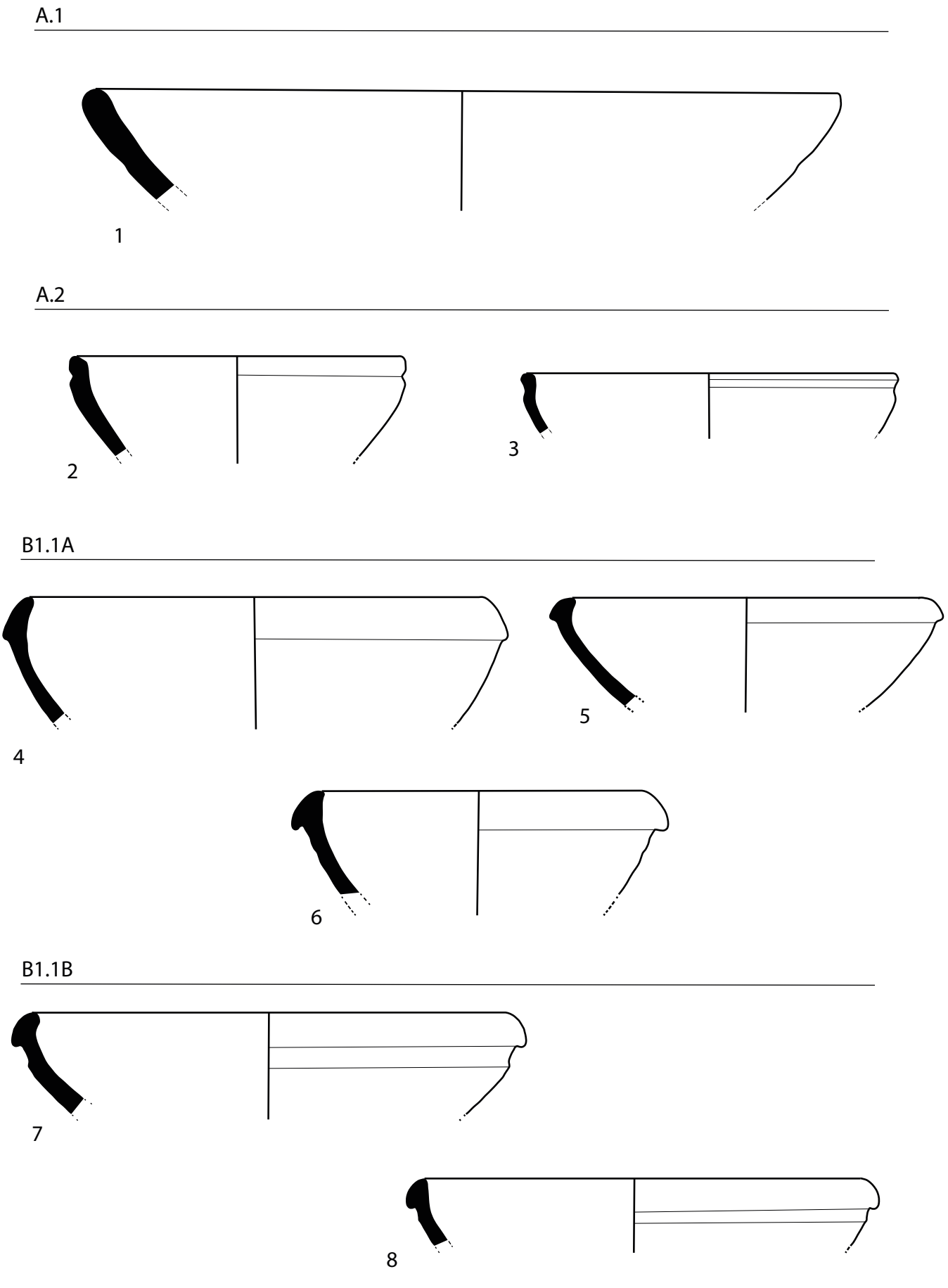
[7] The CRAST contour lines were later integrated into the map published in Lippolis, Masturzo 2012, together with those of Mallowan 1966, since both adopted the same survey benchmark (with an arbitrary elevation of 68 meters a.s.l.).

[8] Fiorina 2011, 129.

[9] Lippolis and Masturzo report that 2.910 elevation points were measured, with an average density of approximately one point every 800 square meters, corresponding to a theoretical grid spacing of about 28 meters (Lippolis, Masturzo 2012, 118).

[10] For which, as noted, reference should be made to the relevant paper in the ICAANE 2025 proceedings.

Type	Plate Number	Typology Code	Fabric	Sector	Comparative References
A.1	1	A.1-15	3/4	623	Khirbet Hatara: VENCO 1997, fig. 1, no. 7, fig. 3, no. 29 Khirbet Khatuniyeh: CURTIS, GREEN 1997, fig. 3, no. 109; fig. 55, no. 354 Lidar Höyük: MÜLLER 1999, Abb. 4, no. AA 05; Abb. 10, no. AB 07; Abb. 13, no. AB 14; Abb. 24, no. AB 34 Nimrud: LINES 1954, pl. XXXVII, no. 2 Sharqat: ANASTASIO 2010, pl. 6, no. 1
A.2	2	A.2-5	3/2	514	Kār-Tukulti-Ninurta: SCHMIDT 1999, Abb. 3a, nos. 9-11 Khirbet Hatara: VENCO 1997, fig. 1, nos. 4-5 Khirbet Khatuniyeh: CURTIS, GREEN 1997, fig. 60, no. 430 Lidar Höyük: MÜLLER 1999, Abb. 7, no. AB 08 Nimrud: D. OATES 1968, fig. 15, no. 32
	3	A.2-10	3/2	623	
B1.1A	4	B1.1A-1	3/4	6--	Assur: HAUSLEITER 2010, taf. 61, no. SF 25 R2 Humaidat: ANASTASIO 2010, pl. 36, no. 4 Kār-Tukulti-Ninurta: HAUSLEITER 2010, taf. 61, no. SF 25 R7; taf. 73, no. ST R12 Khirbet Hatara: NEGRO 1997, fig. 2, no. 15 Khirbet Khatuniyeh: CURTIS, GREEN 1997, fig. 30, nos. 43-44; fig. 35, nos. 124, 127; fig. 5, no. 351; HAUSLEITER 2010, taf. 61, no. SF 25 R6 Khirbet Qasrij: CURTIS 1989, fig. 28, nos. 79-94; HAUSLEITER 2010, taf. 61, nos. SF 25 R4, SF 25 R5; taf. 68, no. ST 9 R1; taf. 72 ST 13 R2 Nineveh: ANASTASIO 2010, pl. 50, nos. 1-2; HAUSLEITER 1999, fig. 4, nos. 7-11; WILKINSON, LUMSDEN 2022, fig. 2.7, nos. 2, 3, 5, 9-15, 17-21 Tell al-Rimah: ANASTASIO 2010, pl. 56, nos. 1-3; HAUSLEITER 2010, taf. 69, no. ST 10.1 Tell Rad Shaqrah: REICHE 1999, fig. 5, no. j Tell Sheikh Hassan: SCHNEIDER 1999, Abb. 6, nos. 1-2, 5; Abb. 7, nos. 7-11 Tell Taya: ANASTASIO 2010, pl. 58, nos. 1; HAUSLEITER 2010, taf. 61, nos. SF 25 R1, SF 25 R3 Ziyaret Tepe: ANASTASIO 2010, pl. 7, no. 2
	5	B1.1A-71	3/5	623	
	6	B1.1A-101	3/1	2--	
B1.1B	7	B1.1B-5	3/2	623	Kār-Tukulti-Ninurta: HAUSLEITER 2010, taf. 69, no. ST 10 R4 Khirbet Khatuniyeh: CURTIS, GREEN 1997, fig. 28, no. 1 Nineveh: WILKINSON, LUMSDEN 2022, fig. 2.8, no. 16; fig. 2.7, nos. 4, 6, 16 Tell Halawa: WILKINSON, TUCKER 1995, fig. 73, no. 4 Tell Rad Shaqrah: REICHE 1999, fig. 5, no. e Tell Sheikh Hassan: SCHNEIDER 1999, Abb. 6, nos. 3-4; Abb. 7, nos. 6, 12 Tell Taya: HAUSLEITER 2010, taf. 69, no. ST 10 R5; taf. 71, no. ST 11 R1
	8	B1.1B-21	3/1	601	



Pl. 1 - Common Ware.

Roberto Dan*

FROM AN ADMINISTRATIVE CENTRE TO A CAPITAL? AN ANALYSIS OF THE ROLE AND ARCHITECTURE OF KARMIR-BLUR/ TEIŠEBAI URU, THE LAST STRONGHOLD OF BIA/URARTU

Abstract

This paper reassesses the role and long-term transformation of the Urartian fortress of Karmir-blur/ Teišebai URU, proposing a new interpretation of its political and architectural evolution from administrative stronghold to late capital, and ultimately to a marginalised post-Urartian settlement. Initially founded in the 7th century BCE under King Rusa II, son of Argišti (first half of the 7th century BCE), as an administrative centre in the Ararat Depression, the site gradually acquired the prerogatives of a royal residence, following the decline of Van/Ṭušpa. Through a combined analysis of architectural phasing, spatial organisation, and epigraphic material, the study reconstructs a dynamic trajectory of expansion, symbolic reterritorialisation, and adaptive reuse. The relocation of royal objects, including a corpus of bronze bowls bearing the names of kings from Sarduri I to Rusa, is interpreted as evidence for a deliberate transfer of ideological legitimacy. Rather than ending in a single catastrophic event, the site's final destruction appears to have occurred during a phase of structural degradation, informal occupation, and ritualised concealment, possibly in the early Achaemenid period. New archaeological data support a scenario of prolonged post-Urartian continuity, in which the citadel functioned as a local power centre within the emerging Orontid system. Karmir-blur thus emerges not only as the last capital of Bia, but also as a site of resistance, transition, and enduring memory at the twilight of the Urartian world.

Keywords

Karmir-blur/Teišebai URU, Urartian architecture, capital relocation, storage and administration, Late Urartian state

Introduction

Among the many Urartian sites known across the Armenian Highlands, the fortress of Karmir-blur – identified with ancient Teišebai URU – occupies a uniquely complex and dynamic position (Fig. 1).[1] Located on the left bank of the Hrazdan River in the heart of the Ararat Depression, and now part of the southwestern outskirts of Yerevan, the site was extensively excavated between 1939 and 1972 by a joint Russian mission. Since 2013, new archaeological campaigns have resumed, shedding fresh light on its architecture, stratigraphy, and symbolic role. These investigations revealed a fortified complex of extraordinary scale and sophistication: a two-level citadel, an extensive network of semi-subterranean storerooms, a temple precinct on an artificial platform, and a large lower town. Traditionally interpreted as a regional administrative centre, Karmir-blur has been re-evaluated in recent years as a potential "capital of necessity,"[2] rising to political prominence following the decline or abandonment of Van/Ṭušpa during the late 7th century BCE. This article revisits

* ISMEO – The International Association for Mediterranean and Oriental Studies.

[1] I would like to thank Mirjo Salvini for the countless discussions on the case of the archaeological site of Karmir-blur and for having introduced me to the broad and intricate issues of Urartian history, epigraphy, and archaeology. I would also like to express my gratitude to Miqayel Badalyan, former director of the "Erebuni" Historical & Archaeological Museum-Reserve with whom I had the pleasure of visiting numerous times both the excavations conducted by Piotrovsky and his own investigations at the site. I am also grateful to Gagik Gyurjyan, former Director of the "Erebuni" Historical & Archaeological Museum-Reserve and the archaeological area of Karmir-blur, at the time when I carried out the aerial imagery used in this contribution. My sincere thanks go as well to Walter Kuntner and Sandra Heinsch, current co-directors of the archaeological excavations at Karmir-blur, for their invaluable insights and for sharing with me their unpublished materials, some of which are cited in this study. A further and heartfelt acknowledgment is due to Marie-Claude Trémouille: our daily exchange of views and perspectives on the Urartian civilisation over more than a decade has contributed in unparalleled ways to shaping my approach to Urartological research. I would also like to thank Onofrio Gasparro for his assistance in preparing the aerial plates included in this text.

[2] The notion of a capital of necessity refers to a seat of power that emerges not through deliberate long-term planning or symbolic centrality, but as a pragmatic response to crisis. Such capitals arise in periods of acute political instability, military threat, or administrative collapse, often as a refuge for the ruling elite or as an attempt to reconstitute authority in more defensible or functional locations. Unlike traditional capitals that embody the ideological and territorial coherence of a polity, these emergency centers are marked by their provisional nature, accelerated development, and frequent incompleteness. They serve less as expressions of enduring statehood than as temporary loci of power, memory, and resistance in the face of systemic dissolution. One such case, extensively discussed in the present article, offers a compelling example of this dynamic in the final phase of the Urartian kingdom.

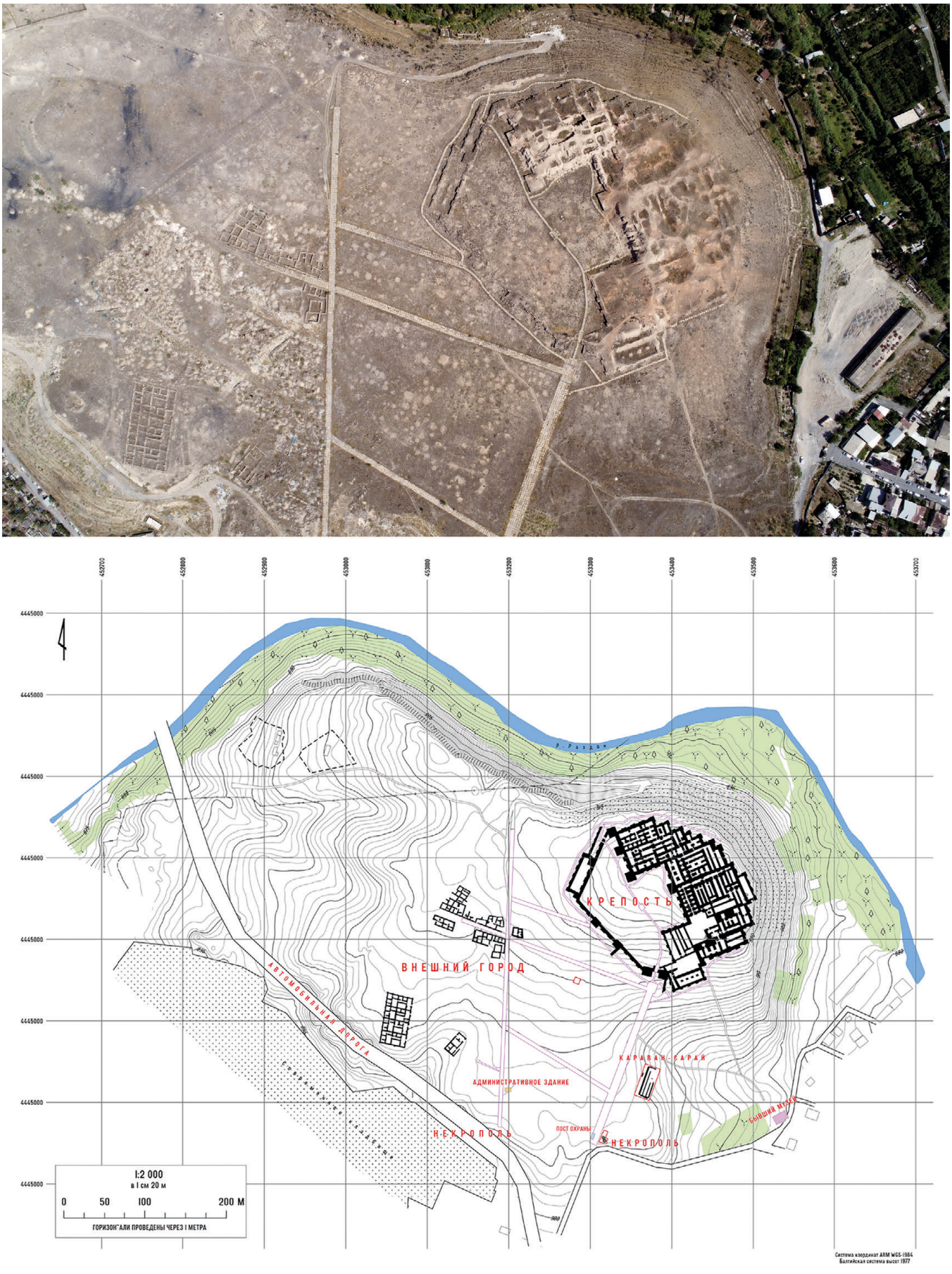


Fig. 1 - Orthophoto (top) and topographic map (bottom) of the site of Karmir-blur (map from Badalyan 2025, map 3).

Romolo Loreto*

FIRST OCCURRENCES OF SCORPION DECORATIVE PATTERNS IN OMAN. IMPLICATIONS FOR SUCH A SYMBOLIC DISPLAY AMONG THE WĀDĪ BANĪ ḤĀLID LATE IRON AGE WARE

Abstract

The 2024 campaign of the University of Naples L'Orientale project in wādī banī Ḥālid, ash-Sharqiya North, Sultanate of Oman, started the investigation of Fort WBK49, a mighty 80 x 40m site discovered in 2023. Among the materials that emerged, two fragments of large storage jars decorated with the scorpion motifs, an iconography first attested in an Iron Age Oman context, stand out. The type and fabric of the vessels allow the site of WBK49 and its materials to be attributed to the 4th-2nd centuries BCE. Therefore, this paper introduces the artefacts found and proposes an initial interpretation of them in the context of their discovery. Indeed, the reason for the adoption of such an iconography may vary according to its meaning and function, whether of a religious nature, of power or as a symbol for seasonal forecasting, especially in light of the polyvalence of the scorpion as a symbol as well as an element with an apotropaic function in the surrounding regions (Mesopotamian, Iran, Anatolia, Egypt) and later Islamic culture.

Keywords

Arabian Peninsula, Oman, Iron Age, scorpion, wādī banī Ḥālid

Introduction

The Italian-Oman project at wādī banī Ḥālid

Since 2019, the archaeological activities of the University of Naples L'Orientale project in wādī banī Ḥālid, ash-Sharqiya North, Sultanate of Oman have been ongoing.[1] In particular, the activities carried out concern: surveys along the wadi, for the definition of the relative archaeological map and thus the mapping of the evidence ranging from Hafit burial contexts (3200-2600 BCE) to the Iron Age (1st millennium BCE - 4th cen. CE) dwelling sites and burials (Fig. 1); excavations at the WBK1 settlement (an extensive fortified site ca. 200 x 120 m wide dated to between the Early Iron Age II and Late Iron Age - 9th cent. BCE - 4th cent. CE) and at the newly discovered WBK49 (a mighty 80 x 40 m extensive fort dated to between the Early Iron Age III and Late Iron Age, 4th cent. BCE - 4th cent. CE) (Figs. 2-3); last but not least, the consolidation and valorisation of WBK1, as part of the agreement with the Ministry of Heritage and Tourism for the enhancement of the archaeological heritage of wādī banī Ḥālid.

With the 2024 campaign, which took place between November and December, the excavation of WBK49, discovered in 2023, began. Its location, approximately 500 m south-est of WBK1, allows to speak of a satellite site, thus bearing witness to a rich and imposing settlement context. WBK49, which may be considered as a mighty military fort, has a sub-rectangular shape and is characterised by a wide casemate wall running on three sides (north, east and south). The west side, on the other hand, where the platform access to the site is well preserved, features a series of residential structures, as does the central area of the fort. During 2024 campaign, in fact, it was possible to demonstrate that the rooms bordering WBK49 to the west are in fact ascribable to a domestic function, given the pottery for food consumption and storage purposes that emerged from the excavations, while the casemates yielded mainly fragments of large storage containers. Among these, along the southern front of casemate, two unique objects in the Oman Iron Age landscape have emerged: two examples of walls of large storage jars datable to the Late Iron Age decorated with scorpions.

Considering the co-presence of environmental (natural springs and large agricultural areas characterised by clay sediments) and anthropic (an imposing settlement, WBK1, and military site, WBK49) elements that make wādī banī Ḥālid a territorial district potentially controlling a vast area involving the surrounding minor wadis, it is necessary to ask whether this decorative element, currently unique to the Oman Iron Age contexts, can be ascribed to a religious, command or, ultimately, associated with the forecasting of seasonal times functions.

Settlement strategies at wādī banī Ḥālid, fort WBK49

Wādī banī Ḥālid presents itself as a wide valley about 25 km long, blessed by natural springs that upstream, at Muqal Cave, gush out to create a consequential watercourse, i.e. adapted to the natural

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[1] Loreto 2020; Loreto, Marcolongo 2023, 150-161.

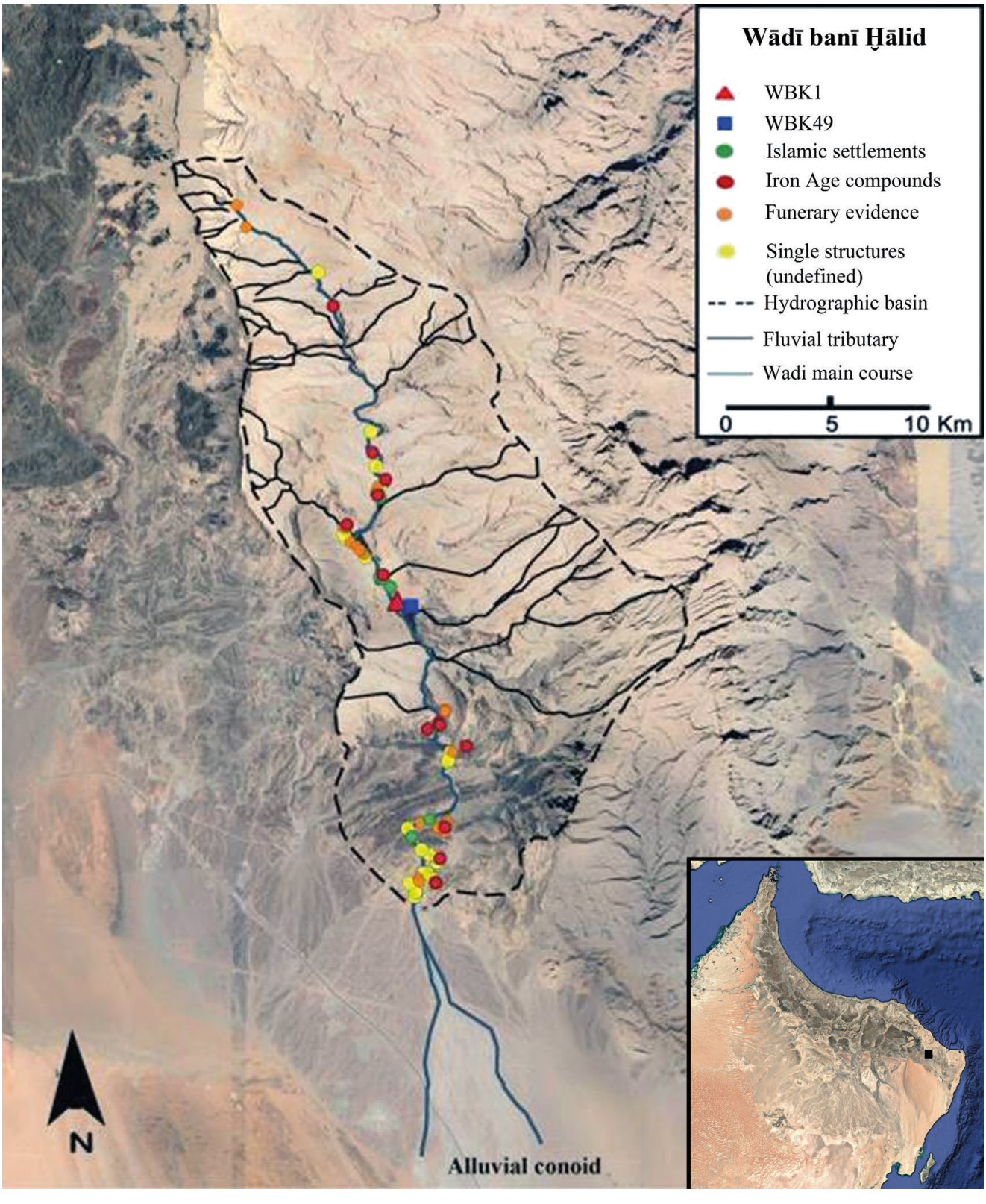

Fig. 1 - Archaeological map of wādī banī Ḫālid (©Missione de L'Orientale nel Sultanato dell'Oman).