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A Study on Designing Provision, Transfer, and Reserving Water in Halfway Caravansarais;

Case Study: Water Transfer System from Arekan to Nowgonbad, Naein Area

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Abstract

The contact between major settlements in the Central Plateau of Iran, especially in desert areas, was not possible without having a secure communication system. In this regard, designing communication networks through constructing secure roads with halfway caravansarais in desert areas, usually without secure underground and surface water supply, needed special insights and provisions. Iranians with good knowledge on water resources and inventing developed techniques of provision, transfer, and reserving water, in addition to constructing halfway installations, in a best way established the necessary foundations for commercial, political, and economic communication between major governmental and commercial centers. Constructing caravansarais and extensive road systems in arid and dry areas in Central Plateau was possible through inventing *Qanat* and designing water transfer system by digging canals in stone, making ceramic pipe lines (*Tanbushe*), and constructing water reservoirs.

The present study is seeking to solve the basic question on the circumstances of designing the water provision systems in halfway caravansarais. For this purpose we chose Nowgonbad caravansarai in the area between Naein and Arekan. Our methodology was based on both examining sources and field observations.

In the study area we know, through sources, the existence of confident water resources near Arekan village, 15 km far from Nowgonbad caravanserai, from at least the 7th century AD. In addition, there was a sophisticated water transfer system designed and executed by use of ceramic water pipes by which water could reach the Nowgonbad caravanserai, where it was stored in reservoirs and then used by the various caravans.

Keywords: *Water Transfer, reservoir, ceramic water pipes (Tanbushe), Caravansarai, and Archaeology*

Survey and Study of Newly Found Epigraphs from Toos Plain

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Abstract

Toos fertile plain, located between two mountain ranges Hezarmasjed and Binalood, has attracted different ethnic groups through ages due to environmental conditions, and has provided a proper ground for human inhabitation and continuation of life since oldest times.

Discovery of handmade tools dated to Lower Paleolithic Age in the middle of the plain and banks of Kashaf River (Kashaf Rud), existence of ancient caves and density and variety of settlements at prehistoric, historic, Islamic and modern times are valuable evidence in this field.

Around these settlements numerous rocky graphs have remained that could be considered a part of artifacts and relics of inhabitants in these settlements. These rocky patterns are scatted at the margins of Toos plain, presenting various subjects like hunting scenes, primitive tools, lattice patterns of naked human body, bison, symbolic designs and signs, human images taking part in battles, hunting and rituals, and goats along with symbolic signs such as circle of sun.

Based on the existing evidence and documents, these graphs could be attributed to prehistoric and historic periods whose creation has continued in the following periods.

Keywords: Rocky epigraphs, Toos plain, prehistoric settlements, symbolic signs, neo-Paleolithic

**The Middle Susiana Based on Potteries
(Based on Survey of Tepe Sebz)**

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Abstract

The site of Tappeh Sabz (or Tepe Sebz) lies 6 kms to the north of the city of Behbahan and 100 meters away on the eastern side of the asphalt road that connects Behbahan to the cement factory and dam construction facilities of Water and Power Organization, at E 50° 7' 38" and N 30° 35' 12". The top of the mound rises to a height of 35–50 m above the surrounding ground level, from which one can look over the whole historical valley of Arjān. The name of Tappeh Sabz comes from the agricultural activities carried out at this site which cause it to look green at most seasons.

The goal of choosing this systematic survey is to obtain statistical findings from the collected data in a methodical study of potteries and other finds in order to determine the chronology of this site. At the first step of the survey 3252 shells were gathered from the surface of the mound and classified. Based on the comparison of the archaeological finds, it seems that Tappeh Sabz is contemporary with Tchoghā Nabut, Tall-e Nokhodi, Tchoghā Mish, Juy and Susa. The proposed chronology for Tappeh Sabz is the Middle Susiana. Most of the shells have geometrical ornaments which are symmetrical.

Keywords: Middle Susiana, Tappeh Sabz, methodical survey, chronography

The Technological Studies of the Fifth Millennium B.C. Pottery from North-Central Iran by Using X-Ray Defragmentation (XRD) and X-Ray Fluorescence (XRF) Laboratory Testing

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Abstract

Scientific advances in the laboratory testing have provided the most effective means for archaeologists to examine their artifactual data in a science-based framework. In this research project we have been able to examine 30 ceramic samples from two archaeological sites with the homogeneous ceramic horizon.

North-central Iran, approximately the area lying between Kashan, Qazvin and Tehran is, characterized by uninterrupted plains watered by streams from the neighboring mountain ranges. As there are no major geographic barriers, in many periods ceramic assemblages were identical throughout the area. Finely made painted ware characterizes the upper part of Cheshmeh Ali IA and has been found at Qara Tepe and Esmailabad Tepe west of Tehran in the upper levels at Zagheh at Saveh and in Sialk II. It occurs in a variety of shapes including cup bowls, spouted bowls, hemispherical and closed bowls, shallow and deep bowls on pedestal feet, basket-handled pot and concave-sided cups. Cheshmeh Ali ceramic horizon is hand-made of fine grained fabric and covered with a burnished orange-to-red slip and painted in black on red. A wide variety of designs include lozenges hatched triangles, festoons, chevrons braided patterns and stylized animals and fish. It is especially well known from the excavations carried out at Tepe Esmailabad. The material from this site seems more elaborate than that of Zagheh. In spite of the facts that all the examined samples belong to the same ceramic horizon in the area XRF and XRD, laboratory testing has indicated certain technological differences between two groups of samples.

Keywords: *North-central Iran, Cheshmeh Ali, ceramic horizon, X-RAY defragmentation, X-RAY Fluorescence*

Some Evidences on Social and Economic Institutions of Iron Age Societies in the Center of the Iranian Plateau

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Abstract

Studying and understanding social, economic and political structures of Iron Age societies is an important aspect of archaeological studies on this age. Archaeological surveys of Iron Age in Iran have so far been concentrated on typological study and comparison of the findings obtained from excavations in the cemeteries of this era, and little attention has been paid to examining and reconstructing various social, economical and political aspects of societies of this period. Our archaeological knowledge of Iron Age Iran is greatly based on the excavations carried out in cemeteries of this period, but settlement sites have not been examined sufficiently.

Most researchers have so far classified Iron Age peoples of Iran as societies lacking organized political and administrative institutions, and have referred to them as wanderers, on the basis of the small number of the settlement sites. Studying, explaining and analyzing the data obtained from the excavation of the settlement sites of this period can prove the existence of social, economic and political institutions and that they were well organized.

The discovery of some grey potsherds with cylinder seal impressions along with such evidences as seals, plaster tokens, big crocks and remains of crock plumps in granaries and places of special usage in large and important Iron Age settlement sites, provides good evidence on social and economic organizations related to agricultural affairs.

Keywords: *Iron Age, Impressed Pottery, Settlement Sites, Organization.*

Mughan Steppe in Sassanian Period

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Abstract

During last few years, three seasons of excavations at the Ultan Qalasi, one season of stratigraphy in Nadir tepesi and a short season of survey in Mughan Steppe enriched our knowledge about the ancient landscape of the area. The Mughan Steppe is a geographically diverse region in the northwestern corner of the Islamic Republic of Iran, defined at the north by the Aras (Araxes) River and including the broad plain to its south as well as the foothills east of the Qara Su river leading up to Mount Sabalan in the Ardebil region. Since the closure of the Russian-Iranian frontier in 1884, the southwestern third of the plain falls within Iran and the northeastern two thirds are within the Republic of Azerbaijan. Since the early 18th century it has hosted the winter camps of the Shahsevan tribal confederacy, who migrated annually between pastures in Mughan and on the slopes of Mount Sabalan.

Already by the time of Shapur I, Mughan was known as Balasagan and was incorporated within the Sassanian Empire. Epigraphic documentation for settlement in Mughan in the Sassanian era is rather sparse. But archaeological surveys in western Mughan Steppe and eastern Mughan and Mil Steppe in Azerbaijan show that there are lots of Sassanian sites, mostly of the fortified type along ancient canals. These evidences indicate intensive land use by the Sassanian state. Previously, large and intensive land use with irrigation canals by Sassanians have been studied in Diyala, southern Mesopotamia and Khuzistan. The Mughan and Mil Steppes present another Sassanian landscape, in this case on the northwestern frontier. The collapse of the intensive Sassanian irrigation system created a void on the steppe which was eventually filled by pastoral nomadic groups.

Keywords: *Sassanians, Mughan Steppe, Archaeological survey, Caucasus.*

An Introductory Approach to the Archaeological Record

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Abstract

The archaeological record is an insufficiently defined concept. The concept is used by archaeologists as a model for their evidence. As a model, it brings metaphysical implications to archaeological theory. Some of the implications of the concept of the archaeological record show that there are actually two different models of archaeological evidence as a record: physical model and textual model. Different conceptions of the archaeological record disagree more fundamentally on the formation processes that have produced the record.

Keywords: *Archaeological record, Textual model, Physical model, Archaeological evidence.*

Survey of Parthian Sites in Northern Hillsides of Alvand's Mountains (Hamedan)

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Abstract

During this survey 29 sites have been recognized totally. Settlement patterns determined base of environmental characteristics such as altitude, ground slope, source of water, petrology and geology, vegetations, land use and specifications of sites including width, chronology, regional distribution and density and all of them have been divided by using geographic information systems (GIS) and cluster analysis in five clusters including I, II, III, IV and V.

On the basis of the collected data, effective reasons for development of permanent settlements in plain are: variant slope from higher part to lower surrounded plain in hillsides, high density sediments in adjacent mountains, and influence of seasonal network in northwest of the region as well as low height valley. Moreover the reasons of increasing the number of pastoral sites in pastures are: higher altitude and unsuitable agricultural grounds and shallow extended sites in every parts of region.

Keywords: *Parthian, Archaeology, Alvand, Hamedan, Settlement*

Chahār Tāqi of Mileh Milegeh, A Fire-temple from the Sassanian Era

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Abstract

The newly found *chahār tāqi* of Mileh Milegeh is one of the fire-temples of the Sassanian era that was built, like other fire-temples of that time, with pieces of rock and plaster. This *chahār tāqi* which is the remaining core of a larger building consists of four stone walls of different sizes surrounded by a round corridor. Inside this fire-temple there is a raised platform for setting up fire furnace (*adusht*) and a number of plaster and stone stands which are unique in their type.

The survey of these items, i.e. the study of religious architecture of the Sassanian era, particularly Iranian fireplaces, will give us a new approach. The study of this fireplace and the fireplace at Shiān can resolve many existing obscurities and gaps about the religious architecture of the Sassanian era, particularly the rituals for commemorate the fire.

In the Pahlavi (i.e. Middle Persian) texts, frequent references were made to Holy Fire which may indicate the significant role of Zoroastrian worshipping places in the Sassanian architecture. However, unfortunately our knowledge of Sassanian fireplaces, especially of *chahār tāqis* tends to be related to architectural styles rather than the significance and status, the rank of their fire, their custodianship and relations with the clergy, way of earning and costs of these worshipping places.

In this paper, the researcher intends to describe the newly found *chahār tāqi* of Mileh Milegeh, and raise a few points on the above topics.

Keywords: Mile Milegeh, *chahār tāqi*, fire-temple, the fire, Sassanian, chronography, application

A Look at the Indexes of Style and Symbol in the Study of Archaeological Evidences and Their Role in our Accessibility to the Past Conceptions

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Abstract

Dichotomy is a serious obstacle in archaeological studies; it is a problem all fields of human, social and historical knowledge and even natural sciences are faced with. However, in archaeology, especially prehistoric archaeology, this problem is followed with practical difficulties and epistemological failures as well. What is referred to as archaeological evidences are all wordless, distorted, and shattered into pieces which must be archaeologically organized, joined, structured, repaired, described, written, interpreted, analyzed, represented, reconstructed or conceptually, mentally and virtually reconstructed so that we can extract some kind of archaeological meaning and significance out of its material body despite its limitations and imperfections; an understanding that is not quite unrelated with the past events.

By raising the key issue of style and symbol, the present paper attempts to study the possibility or impossibility of obtaining this goal in archaeological researches.

The archaeological relics, when interpreted and analyzed semantically within a systematic methodology suitable to the subjects under study, can help build a bridge over to the conceptual systems, mental performances and forgotten desolate behaviours of ancient societies and populations. For this reason, the present paper has chosen the style and symbol like a bridge between the archaeological visible evidences and data and the past frozen conceptions and behaviours as its main topic.

Keywords: archaeological relics, conceptual systems, style, symbol, symbolic behaviour

Why Kerman Province cannot be the Location of Šīmaški?

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Abstract

Šīmaški is one of the important Toponyms in old Elamite Period. Until now, there has been no agreement among archaeologists on the location of this Toponym. This article wants to show why the Kerman Province cannot be the good candidate for this Toponym. For this purpose, the authors used the archaeological and written documents. An important integrative analysis of archaeological survey data with evidence from the written sources renders it undeniable that the Šīmaški region was richly endowed with administrative state enumerated in the texts. The precise geographical range of transactions sites documented is not known since the locations of the most of the geographical names in the texts are unknown or not established beyond question. In general we are dealing with an administrative region that includes most of the environs of the southern or southwestern parts of modern Iran. Exactly how close to Kerman the administrative sphere of the Šīmaški system extended is still debated but, it might have reached all the way to this easternmost of the Persian heartland. Obviously, it is possible that these purviews overlapped.

Keywords: *Historical Geography, Toponym, Old Elamite Period, Šīmaški, LÚ-SU (A.)^{Ki}, Kerman*

ISBN: 1026-2288

**Journal
Archaeological Studies
Litterature and Faculty of Human Sciences
University of Tehran**

Spring & Summer1388

V. 1

NO. 1