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Capital of a Pillar meant for flower pot, Rawalpindi
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Vol. 36, No.1, July 2013

CONTENTS

-1-
Prehistoric shell middens, seascapes and landscapes at Lake Siranda (Las Bela, Balochistan) Preliminary results of the 2011 fieldwork season

Paolo Biagi, Alberto Girod and Renato Nisbet

Abstract
The first season of archaeological surveys carried along the shores of Lake Siranda (Las Bela, Balochistan) in January 2011 has shown the presence of two prehistoric shell middens characterised by fragments of mangrove and marine shells as well as chipped stone artefacts. The shell middens were AMS dated to the middle Holocene by one single specimen of Terebralia palustris gastropod. Their presence indicates that mangrove environments exploited by groups of shellfish gatherers existed in the area at least since the above period, and that the present-day lake depression was in fact a shallow tidal lagoon of the Arabian Sea, the shores of which had been settled at least during part of the Neolithic.

Keywords
Balochistan, Las Bela, Lake Siranda, Shell middens, Mangrove environments, Shellfish gatherers

1. Preface

This paper is a preliminary report of the surveys carried out at Lake Siranda in January 2011. Its scope is to describe the finds we discovered, discuss the results we obtained and frame them into the general picture of the archaeology of Las Bela province and the northern coast of the Arabian Sea.

Very little is known of the archaeology of Lake Siranda and the region that surrounds it. This is mainly due to the absence of any systematic survey along the coast of Las Bela (Khan, 1979a), the only exception being that of Sir A. Stein, who provided us with a detailed description of the geography of the province (Stein, 1943: 194-219), during his research aimed at the definition of the route followed by Alexander on his retreat to Babylon across the country of the Oreitai.

In his paper, A. Stein describes the place where the Macedonian army camped, which is briefly reported by Arrian (Alexandrou Anabasis, VI: 5) close to "*a water not large*", translated by Sir A. Stein (1943: 214) as "*a small (sheet) of water*", possibly the eastern shore of Lake Siranda. This place was probably chosen by Alexander because of the scarcity of water in "*mostly an uninhabited desert*, *presenting a wilderness of hills and cliffs with swampy or arid clay plains*" with capricious rainfalls "*the greater part in summer, some in winter*" (Field, 1959: 17), "*situated as it is just without the limits of the south-west monsoon*" (Carless, 1855; see also Pithawalla, 1953: 21).

The most important archaeological site in the area is Kot-Bala (better known as Balakot), which was discovered by R. Raikes in 1960 (Raikes, 1968), and later reported by A.R. Khan (1979b: 3). The site, located in the Khurkera alluvial plain, some 5 miles east-south-east of the southernmost coast of Lake Siranda, and 2 miles north of the course of the Windar, was excavated by G.F. Dales in the 1970's (Dales, 1974; 1979; 1981). It is a multi-stratified mound with occupation layers and structures attributed to the Chalcolithic and Bronze Age periods, radiocarbon-dated between 5200±135 (UCLA-1923A) and 4210±80 (UCLA-1293D), and 4050±130 (HAR-1992) and 3890±100 uncal BP (HAR-1993) respectively (Possehl, 1988: 171-172). Nevertheless these results are from samples collected from a reverse stratigraphic position, and their reliability has been greatly disputed by (see Shaffer, 1986: 74).

The study of the faunal remains collected during the excavations showed an "*enormous quantity*" of broken specimens of *Terebralia palustris* gastropods "*gathered for food*" (Meadow, 1979: 296), which are supposed to indicate the presence of a mangrove environment rather close to the site.

"*Weathered samples of these shells*" are reported also by R.E. Snead (1966: 60) from the eastern shore of Lake Siranda, a shallow depression "*about two miles north of the Miáni village. When full it is about 9 miles long and 2 miles broad. Its general situation is north and south. The average depth of water in the cold weather is 3 to 5 feet, but the part known as* kun *in the south-west corner attains to a depth of 22 feet. On the occurrence of floods the level is raised some 10 or 12 feet* (Minchin, 1907: 9).

The lake, surrounded by sand dunes on its western and eastern sides (Snead, 1967; 1969: 33-35; Snead and Frishman, 1968), is considered by many authors a playa remnant of the Sonmiani lagoon (Snead, 1966). It receives water from the Watto River and through it from large branches of Porāli and Kharrari rivers, the first of which holds in solution a large quantity of saline ingredients (Hughes, 1878: 125), at its northern end, and sometimes also from the Windar River from the south-eastern side, caused by overflow from the dam mentioned below. In order to prevent egress of the water and allow some kind of cultivation (nowadays no longer practiced; recently large earthy dams have been built for the same reason along the southeastern side of the depression), a dam known as Bandar Windar was erected under Jam Mir Khan II around the mid XIX century (Minchin, 1907: 10), and occasionally the lake was crossed by boats coming from Damb.

According to R.E. Snead, at the present time only two overflows from the lake are possible, at the opposite (N and S) extremities of it (Snead 1966: Figure 15). As a matter of fact, after normal floods large part of the water is slowly absorbed or evaporated and large parts of the surface are consequently covered with mud cracks and salt spots.

Little is known of the early history of the lake. It is accepted by the authors that it was formerly part of the present Sonmiani lagoon (Miani Hor), sharing with it its dominant environmental aspects, and that it "*functioned as a tidal lagoon in the not-too-distant past*" (Snead, 1966: 60). According to the above author this depression was formerly connected to Sonmiani from which was later separated by sand dune formations, later stabilized by vegetation (Snead, 1969: 34), although this opinion needs further investigations to be accepted.

2. The 2011 Survey

A preliminary survey was undertaken in the depression by two of the writers (P.B. and R.N.) and Prof. M.K. Badini of the University of Balochistan, Quetta on January 10th and 11th, 2011 (Figure 1). The surveys were aimed at 1) the discovery of prehistoric shell middens, which were supposed to exist in the area due to the recovery by R.E. Snead (1966: 118 and Figure 15) of weathered samples of *Terebralia palustris* and *Telescopium telescopium* mangrove shells along the eastern shore of the lake, 2) the definition of the past extension of the

mangroves following the description by the above author of recently-disappeared mangrove environments (Snead, 1966: Figure 21), and 3) the eventual prehistoric/historic connections of the Siranda basin with the Sonmiani lagoon, and the Arabian Sea in general, and 4) the reasons why, and when, it changed into a (seasonal) freshwater lake. Thus the research began from the central-eastern coast of the depression and later extended to its central part.

Two shell middens were discovered (Figure 2) the characteristics of which are provided in Table 1. They consist of concentrations of fragmented shells of mangrove molluscs (*Terebralia palustris* and *Telescopium telescopium*) and Arcidae, from which a few chipped stone artefacts made from chert of unknown sources were collected (Table 1; Figure 3). One single specimen of *T. palustris* was AMS-dated from each site showing that they were settled during the second half of the 7th (SRN1) and the end of the 7th/beginning of the 6th millennium uncal BP (SRN2) (Table 2). The location of the following points has been taken with a GPSmap 60CSx device, using WGS 84 as Map Datum.

SRN1 (25°32’31.1”N-66°37’09.5”E, 5m asl). This low, almost circular shell midden, some 20m in diameter, is located along the central-eastern shore of the basin, where a seasonal stream enters it, at an altitude of some 5m (Figures 4 and 5). The site is characterized by (mainly) fragmented, weathered and decoloured *T. telescopium* and *T. palustris* mangrove gastropods and *Anadara* sp. shells. The site surface is covered also with freshwater gastropods.

SRN2 (25°31’31.0”N-66°36’48.9”E, 2m asl). Only a small part of this small shell midden is exposed, given that it is mostly covered by a sand dune with a north-south orientation. Its was found because of the recovery of *T. telescopium* and *T. palustris* on its surface. The site is located some 2km south-west of SRN1 at an altitude of 2m (Figure 6).

Except for the above prehistoric shell middens, other sites where sampled mainly for molluscs identification (see Table 3). They are:

SRN3 (25°31’44.6”N-66°36’49.6”E, 2m asl). Is a low, vegetated sand dune, some 250 m north of SRN2, totally covered with freshwater gastropods, a sample of which was systematically collected from a surface of 2 sq. m. From this site comes a chert flakelet (Figure 3, n. 5). The site, from which mangrove shells were not recovered, did not yield any other trace of human activity.

SRN4 (25°32’07.0”N-66°37’02.3”E, 3m asl). Freshwater gastropods were collected randomly from this spot, from which fragments of mangrove shells, mainly *T. telescopium* were noticed, most probably indicating the presence of a shell middens in its surroundings.

SRN5 (25°33’40.4”N-66°35’36.4”E, 6m asl). Is located in the northernmost part of the lake surveyed in 2011. Among the sparse, bushy vegetation of Figure 7 a scatter of *Circenita callipyga* marine bivalves was observed and partly collected a few dozen metres east of the shrine of Haji Syed Baba.

SRN6 (25°31’48.9”N-66°37’16.9”E, 10m asl). Another collection from a spot very rich in the freshwater gastropod *Melanoides tuberculata*.

SRN7 (25°31’32.9”N-66°36’44.2”E, 4m asl). From the slope of a sand dune, west of SRN2, comes one specimen of *Anadara* cf. *uropygmelana* whose valve shows breakages on the side margin probably due to opening by man.

3. Botanical aspects

At present Sonmiani lagoon is characterized by a small but interesting mangrove cover, the only surviving site along the whole Pakistani coast where *Avicennia marina*, *Ceriops tagal* and *Rhizophora mucronata* co-exist (Saifullah and Rasool, 2002), in spite of severe human pressure exerted in the course of centuries.

Settled very close on the west to the Las Bela Axis (one of the important tectonic elements of the region), the whole coastal and adjacent areas have been submitted to strong epeirogentic movements in the past that are still active (Snead, 1967). It is admitted that uplift movements cut the ancient connections between Miani and Siranda, causing eventually silting of the inner basin. Quoting the Survey of India 1915, R.E. Snead (1966: Figure 21) points to the presence of living mangroves some 4 or 5 kms along the south-western side of Siranda Lake at the end of XIX century, but no traces of these have survived or are visible any longer, and the information deserves further control.

Studies of the vegetation in the Las Bela area have been carried out by several authors since Boissier’s explorations mid XIX century: a general account is given in Snead and Tasnif (1966). Nowadays the

vegetation, as it was possible to examine during the short survey in January 2011, is mostly formed by halophytic Chenopod herbs and shrubs on the muddy flats (*Arthrocnemum indicum*, *Haloxylon* sp., *Salsola baryosma*, *Suaeda monoica*, *Salsola* spp.); on sandy dunes *Aerva javanica*, *Calotropis procera, Acacia* sp. and *Prosopis cineraria*; on the surroundings sandy hills *Tamarix* spp., *Salvadora oleoides*, *Acacia* sp.

Nothing of this flora points to a past existence of a lagoon with localized mangrove swamps and only a detailed coring project could provide sound palaeoenvironmental data. The scattered presence of shells of mangrove molluscs (*T. telescopium* and *T. palustris*) would point to a former local presence of this kind of association, but an off-site collection of molluscs should also be taken into account, as it has been suggested in the not far Chalcolithic/Bronze age site of Balakot (Meadow, 1979).

In her studies on pollen assemblage at Balakot, some 5 miles east-south-east of southern side of Siranda Lake, McKean (1983) concludes that in the late Holocene the climate was not wetter than that of the present. Her pollen diagram shows the dominance of desert/dune scrub taxa, and particularly Chenopodiaceae family, with close similarities to modern pollen assemblages of the area. It has been suggested by the same author, that Chenopod pollen was deposited by the wind blowing from coastal dunes and Siranda Lake, with its possible larger connection to Sonmiani lagoon, would have therefore approached the coastline to the site. Another important point is the total absence of mangrove pollen in the Balakot diagram. Despite mangroves (particularly *Rhizophora*) produce fairly high quantities of pollen, its circulation is limited by the density of the canopy and would not travel far from the original source. Therefore the absence of mangrove pollen at Balakot does not imply necessarily the absence of mangroves even in the ancient Siranda Lake. Only further research and the possible presence of mangrove macro-remains (wood and/or charcoal) buried in the sediment of Siranda would contribute to the solution to this problem.

4. The malacological remains

Malacological remains were collected from different spots of the

central-western and (SRN 5) e central parts (SRN 3, SRN 4, SRN 6, SRN 7) of the basin, the shores of which are covered with a scarce bushy vegetation (Figure 7) that slowly disappears towards the centre of the dried lake, where wide sandy spaces prevail. The altitudes of the above sites vary from 2 to 10m. Shell spots are common to many of the surfaces of the central portion of the lake crossed during the survey. The above samples have been collected from specific spots for a first qualitative analysis.

Two are the most important components: 1) a few coastal marine species, from sites SRN4, SRN5, SRN6 and SRN7, and 2) freshwater species that prevail from SRN3, SRN4 and SRN6 (Figure 8). SRN6 yielded also one land snail (Figure 10 and Table 3).

Zootecus chion: five species of *Zootecus* have been described from the Indian Subcontinent and its adjacent regions (Ramakrishna and Mitra, 2010). *Z. chion* is reported from both Karachi and Balochistan, Las Bela plain included, where it is signaled as a subspecies of *Zootecus insularis* (Ehrenberg, 1831) (Haas, 1959; Snead, 1966; Thomas, 1999). Although this genus needs a taxonomic revision, the attribution of 7 specimens from SRN6 to the species *chion* (Pfeiffer, 1856), based on the smaller dimension of the shell, compared with *Zootecus insularis*, seems to be correct (A. Schileyko *in litt*., 10.03.2011; E. Neubert *in litt*., 07.04.2011).

Although *Z. chion* and *Z. insularis* are both reported from arid and semi-arid environments, their presence seems to be connected with vegetation covers of soils close to water-related environments, where it reaches the highest percentage of individuals per sq. m. during drier and hotter seasons (Garg *et al*., 2009).

The five freshwater species are common in the Middle East and the Indian Subcontinent (Abdel Azim and Gismann, 1956: 415; Snead, 1966; Thomas, 1999; Subba, 2003; C.A.M.P., 2005; Pointier *et al*., 2005; Burdi *et al*., 2008; Sarang and Sharma, 2009; Liu *et al*., 2010). They live into low hydro-dynamic shallow water environments characterized by shoreline vegetation with *Phragmites* e *Typha*. They are often found on the bottom-surface during dry seasons (Plaziat, 2005).

Bellamya bengalensis (banded-pond-snail) is a benthic pond snail living in quiet freshwater, on the bottom muds and in estuarine brackish

water also at a minimum distance of 10 m from the sea, where it is present in shore deposits. It is commonly found floating on the water surface among aquatic vegetation. It can survive temporary during the periodic drying out of the water supply (Hora, 1951; Ali *et al*., 1987; Subba Rao, 1989: 227; Nazneen and Begum, 1994; Plaziat, 2005). This species has already been recorded from Siranda by R. E. Snead (1966: 118). In some regions of India it is used as poultry food (Rabbi, 2009).

Melanoides tuberculata is abundant from SRN3 and SRN6 where many juvenile specimens with 3-5 spires probably indicating a local population, have been collected. This species prefers shallow, sparsely vegetated freshwater habitats with a maximum temperature of 34°C, with a maximum concentration of 600 individuals per sq. m. in residual waters during the summer months (Starmühlner, 1984; Sarang and Sharma, 2009). Concentrations of dead individuals are known from the periphy of Lake Siranda, after its dissecting (Snead, 1966). This euryhaline species is generally associated with low salinity environments (0.2-3.0‰) although it tolerates salinity up to 23.0‰ (Plaziat, 2005).

Lymnaea acuminata: it is reported from Balochistan and India also as *Lymnaea luteola* Lamarck, 1822. It can be distinguished because it is less slim, with a more ovate aperture less covering the penultimate spire (Hubendick, 1951: 161, fig. 343). Its ordinary physiology is at 20-25 °C while at some 40°C it is subject to stress (Suresh *et al*., 1994; Jgyasu and Singh, 2010).

Gyraulus euphraticus: hid usual habitat is the sub-aqueous portion of the rooted vegetation of lakes and swamps.

Indoplanorbis exustus: it is an invasive species of rapid spread because of its great fertility. It is widely diffused from Central Africa to the Arabian Peninsula and from the Middle East to South-East Asia and the Philippines (Pointier *et al*., 2005; Liu *et al*., 2010). Snead (1966: 118) reports it from Siranda. It is typically for stagnant waters with rich vegetation and organic debris, also found near the banks of slowly running waters. It lives in waters up to 34°C, which cause great mortalities. The greatest concentration of living individuals occurs during the winter, due to climatic factors (Starmühlner, 1984; Sarang and Sharma, 2009).

The limited number of marine specimens is exclusively due to the

selective collection. The two gastropods, and the three bivalves, are related to mangrove environments (Reid *et al*., 2008; Shanmugam and Vairamani, 2011) (Figure 9).

Telescopium telescopium is essentially an estuarine form of upper intertidal zone. It feeds on organic detritus and surface algae found on exposed mudflats where aerial daily exposure originates a terrestrial environment with bare substratum temperatures exceeding 50°C during the sunny days (Hora, 1951; Lasiak and Dye, 1986). Given its large dimension, up to 110 mm, this gastropod plays a very important alimentary role and, like *Anadara rhombea* and *Terebralia palustris*, is collected and sold in the Indian markets (Sriraman *et al*., 1988; Jerald, 1994; Solaiman, 2007). *T. telescopium*, *T. palustris* and *Tibia sp*. are reported from the eastern shore of lake Siranda (Snead 1966: 60). Their presence was first connected with the "*a tidal lagoon in the not-too-distant past*" (Snead, 1966: 60).

Thais lacera lives in mangrove swamps, in the intertidal band sandy bottoms and rocks covered with mud (Wijsman and Riegl, 2001). It has been collected from sites discovered along the coast of Makran where it has been radiocarbon-dated to 4685±85 uncal BP (Ly-5132) at Pasni, and 5960±105 uncal BP at Paleri Kaur (Sanlaville *et al*., 1991).

Anadara rhombea: only one valve was collected from SRN4 for identification. Empty valves of this species are recorded for the polluted stations along the final part of the ephemeral Lyari River, seasonally flowing into the Arabian Sea near Karachi (Nazneen and Begum, 1994).

Anadara cf. uropygmelana: only one valve was collected from SRN7 for identification. Further fragments and entire shells were recovered in 1991 in the Holocene littoral shores at Pasni (Ly-4914: 4235±65 uncal BP), in the sediments of Ankara Kaur (Ly-5138: 5550±130 uncal BP) and Jiwani lagune (Ly-5232: 2725±70 uncal BP), all sites of the Pakistani Makran (Sanlaville *et al*., 1991).

Circenita callipyga: the identification of the valves of this Veneridae is uncertain given their fragmentary state of preservation, without posterior area where the presence of a pallial sinus seems to be absent. This bivalve lives in the shallow waters of the upper intertidal zone, on sandy and muddy bottoms of subsidiary channels beside the main mangrove channels where it encounters high temperatures up to 31°C.

C. callipyga and other species belongs to archaeological mollusc massive assemblages collected for food (Beech *et al*., 2000; Feulner and Hornby, 2006; Bagher *et al*., 2007).

To sum up: *Melanoides tuberculata* is the commonest species especially from SRN3 and SRN6 both located in the central part of the dry basin. Spots are common from many areas from which water retreated, causing the death of adult and young individuals (Plaziat, 2005) or resulting from floods that transported and left inside water holes both living individuals and empty shells. The collected specimens do not show any trace of abrasion and weathering.

The habitats of the 5 freshwater snails and terrestrial *Z. chion* are not related with mangrove environments where intertidal species live.

5. Discussion

The discovery of shell middens and other evidences of prehistoric activity in the Siranda basin contribute to the interpretation of some of the events that took place in the lower Las Bela province, which are of basic importance for the understanding of the first human settling along the northern coast of the Arabian Sea. The possibility that the Siranda depression was filled with marine waters in the past had already been suggested by a few authors. The impression that the lake "*had been formed by the gradual recession of the sea*" (Minchin, 1907: 10), that it was "*at one time connected to Miani Khor*" (Snead, 1969: 34) and "*functioned as a tidal lagoon*" (Snead, 1966: 60) had already been perceived.

Nevertheless no attempt has ever been made at developing a defined chronology of the events that took place in the area, and understand when and why the lake connections with the sea were interrupted. The scarce information reported by the classical authors seem to indicate that Siranda had already turned into a freshwater basin in the 4th century cal BC, although we do not have any data helping define when the change happened.

The brief survey conducted in January 2011 has shown that the coasts of Lake Siranda were temporarily or seasonally settled for the first time during the second half of the 7th millennium uncal BP, and that the oldest sites in the region consist of shell middens, which were exploited for the gathering of edible mangrove molluscs. This

phenomenon is largely attested from many sites along the coasts of the Arabian Sea and the Persian Gulf (Boivin and Fuller, 2009; Biagi *et al*., 2013).

The available radiocarbon evidence shows that the first inhabitants started to settle along the shores of the northern Arabian Sea around the beginning of the 7th millennium uncal BP, and that the seafaring activity in this part of the ocean started in this period (if not slightly before), as shown by a set of radiocarbon dates from the coast of Las Bela and the Indus delta shell middens (Biagi, 2011).

Opposite to what is known from most of the other middens of the Arabian Sea, the Siranda sites are very rich in *Telescopium telescopium* gastropods. It is difficult to state whether this species is a precise environmental indicator, given the scarcity of data available from the entire territory. It is nevertheless important to remark that *Terebralia palustris* is reported from Balakot by R.H. Meadow (1979: Fig. 6), where it is very common in the Indus horizon (67% of the total shell assemblage), while it reaches only 18% in the Chalcolithic layers.

The available data from Las Bela coast are still very fragmentary and thus difficult to interpret. They show that changes took place in the local mangrove ecosystems, and in the exploitation of the mangrove resources at least since the middle of the Atlantic climatic period.

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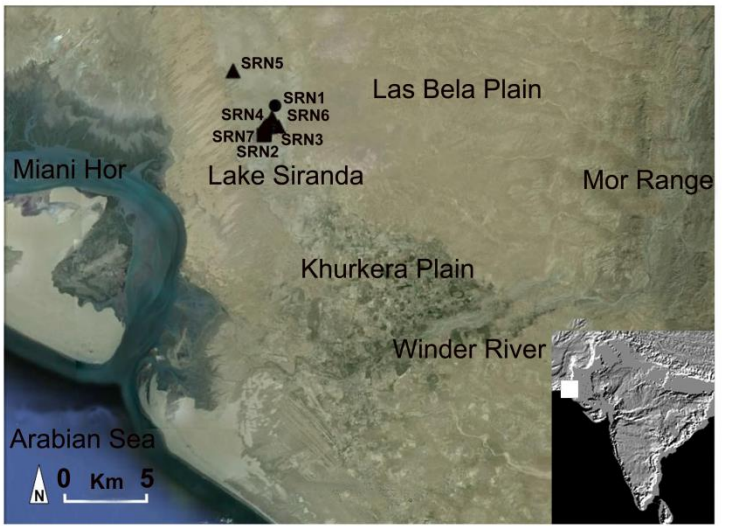

Fig. 1: Location of Lake Siranda in its geographical context (*drawing C. Franco and P. Biagi*)

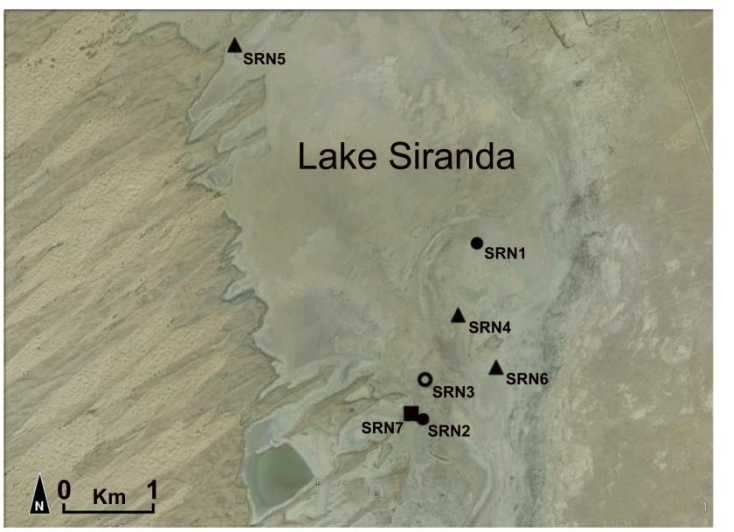

Fig. 2: Lake Siranda: distribution map of the sites mentioned in the text. Shell middens (dot), chert tool (circle), shell spots (triangle), *A. uropygmelana* (square)(*drawing C. Franco*)

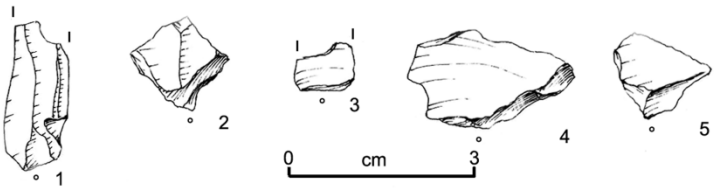

Fig. 3: Lake Siranda: chipped stone artefacts from SRN1(1-3), SRN2 (4) and SRN3 (5)(*drawings P. Biagi and G. Almerigogna*)

Site	Material	Typology	Colour (Munsell)	Condition	Measures (mm)	Figure
SRN1	chert	bladelet	strong brown - 7.5YR5/6	proximal fr.	(25)x10x02	3, n. 1
SRN1	chert	microflakelet	dusky red - 10R3/3	complete	15x18x03	3, n. 2
SRN1	chert	microflakelet	reddish brown - 2.5YR4/4	proximal fr.	(08)x10x02	3, n. 3
SRN2	chert	microflakelet	bluish grey - 2 for gley 6/1	complete	14.5x14.5x03	3, n. 4
SRN3	chert	flakelet	unknown	complete, burnt	16.5x25x03	3, n. 5

Table 1: Lake Siranda: main characteristics of the chipped stone artefacts collected from sites SRN1-SNR3

Site	Lab. n°	Coordinates	Uncal BP	Cal BC 1 sigma	Cal BC 2 sigmas	Delta ^{13}C	Material	Altitude
SRN1	GrA-50325	25°32'31.1"N-66°37'09.5"E	6305±40	4615-4481	4682-4437	-6.213	*T. palustris*	5m
SRN2	GrA-50323	25°31'31.0"N-66°36'48.9"E	5950±40	4259-4113	4306-4046	-4.638	*T. palustris*	2m

Table 2: Lake Siranda: AMS dates from sites SRN1 and SRN2 calibrated with the reservoir value of 229±27 (*Reimer and Reimer, 2001*)

Fig.4: Lake Siranda: shell midden SRN1 with the indication of the point from which one *T. palustris* specimen was collected for AMS dating (*photograph P. Biagi*)

Fig. 5: Lake Siranda: chert bladelet and fragmented mangrove gastropods *in situ* on the surface of SRN1 (*photograph P. Biagi*)

Fig. 6: Lake Siranda: shell midden SRN2 with the indication of the point from which one *T. palustris* specimen was collected for AMS dating (*photograph P. Biagi*)

Fig. 7: Lake Siranda: the vegetated area of SRN5 from which a scatter of *Circenita callipyga* marine bivalves was collected for AMS dating (*photograph P. Biagi*)

Fig. 8: Lake Siranda: SRN6 scatter of *Melanoides tuberculata* freshwater gastropods from the surface of the dissected lake (*photograph P. Biagi*)

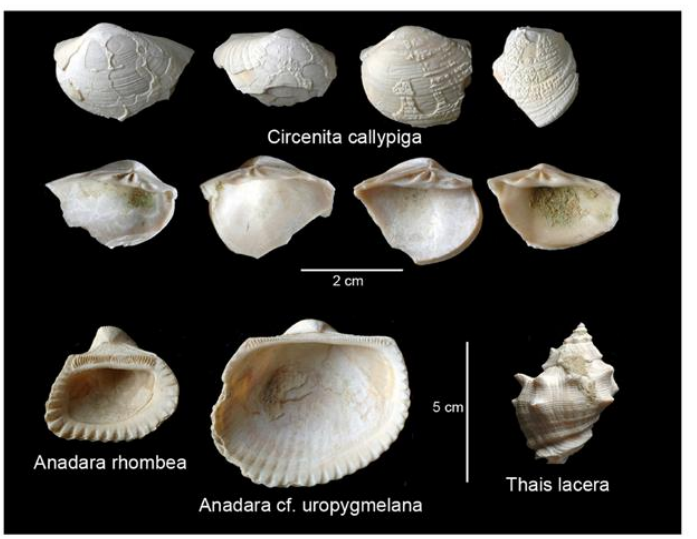

Fig. 9: Lake Siranda: marine molluscs: *Circenita callypiga* (SRN5); *Anadara rhombea* (SRN4); *Anadara* cf. *uropygmelana* (SRN7); *Thais lacera* (SRN5) (*photograph A. Girod*)

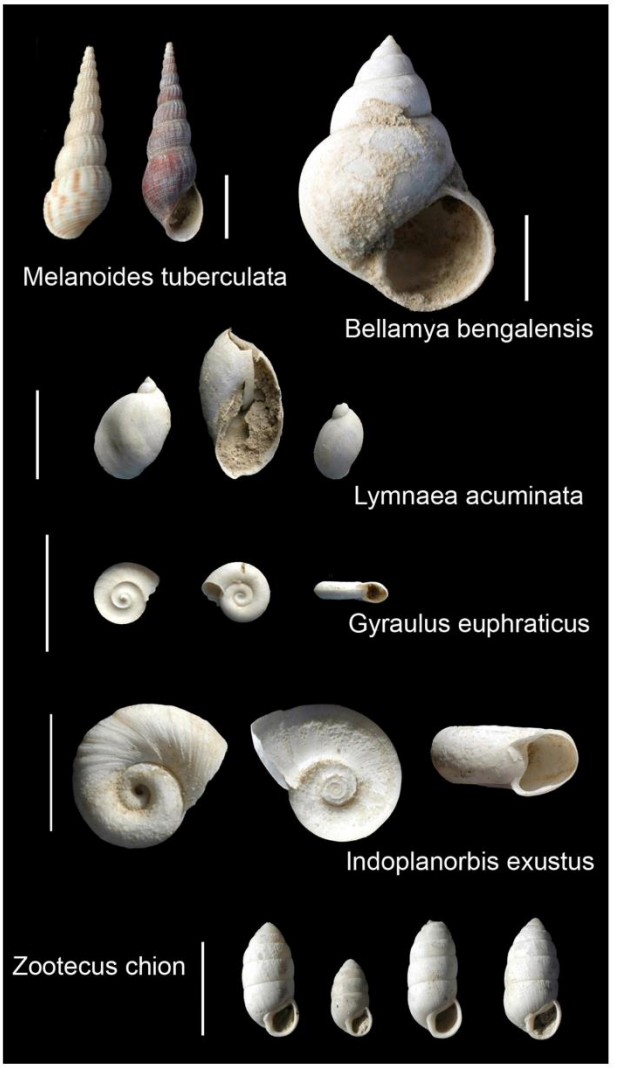

Fig. 10: Lake Siranda: freshwater and land snails from the bottom of the basin. Bars = 1cm (*photograph A. Girod*)

MOLLUSCS	SITES				
	SRN3	SRN4	SRN5	SRN6	SRN7
Land snails					
Zootecus chion (Pfeiffer, 1856)				7	
Freshwater Gastropods					
Bellamya bengalensis (Lamarck, 1822)	3				
Melanoides tuberculata (Müller, 1774)	167	25	4	173	
Lymnaea acuminata (Lamarch, 1822)	5			2	
Gyraulus euphraticus (Mousson, 1874)	2				
Indoplanorbis exustus (Deshayes, 1834)	7			5	
Sea Gastropods (mangroves)					
Telescopium telescopium (Linnaeus, 1758)		1		1	
Thais lacera (Born, 1778)			2		
Sea Bivalves (mangroves and mud)					
Anadara rhombea (Born, 1778)		1			
Anadara cf. *uropygmelana* (Bory St. Vincent, 1824)					1
Circenita callipyga (Born, 1780)			10		

Table 3: Lake Siranda: number of the mollusc specimens collected from SRN3-SRN7 (see figures 9 and 10)

-2-
A Neolithic-Chalcolithic Settlement in Swat: Elanai-kamar.
A Preliminary Note

Ikram Qayum

Abstract
This paper deals with the exceptional discovery of a Neolithic-Chalcolithic settlement site in Swat Valley, Elanai-kamar,, with its location, findings, as well as with its cultural relations with other comparable sites. The morphological and geological makeup of the area seems to be perfectly designed for early man to be settled here.

Introduction to the site

The site of Elanai-kamar[1] (hence after EK)is located to the east of Sarsinai across the Nipkhi-khel *khwar*. Morphologically it is a large and flat plateau extensively eroded, whose west ridge dominates the Nipkhi-khel *khwar* from the top of a vertical impressive cliff[2]. (Figs. 25, 26, 29, 30)

Geologically the entire plateau is made of fine clay eroded and denudated over the time. The safe location, the presence of permanent water, the presence of huge deposits of fine clay, totally suitable for pottery-making, but also the visual dominancy, should have attracted human settlement since immemorial time.

The clay of EK is famous amongst the potters of the region and still dug for pottery-making. During the survey, by the way, I recovered also several fragments of large blocks of backed clay, certainly a byproduct of pottery-making, a clear testimony of the presence of kilns in ancient times.

With reference to the Swat Culture periodization (Ghalegai

[1] The name is given due to the presence of a specific wild plant called in Pashto *Elanai* (Zizypus oxyphyla Edgew), which were locally growing in the past.

[2] The site was discovered by the present author during his survey in Tehsil Kabal area as a requirement of his master degree at the Taxila Institute of Asian Civilizations, Quaid-e Azam University, Islamabad).

Sequence), EK might be interpreted as a Period III-IV site, even though there are scanty evidence that might refer to earlier periods.
From the surface collection, the distinction between Period III and IV is not easy, however, there are some clear markers, which can help us in ascribing the collected sherds into one or the other Period.

Period III
Hand-made, crude paste, mostly grey and brown in color with basket made impressions bases recovered from EK are the clear evidence of period III of the Swat sequence (Stacul 1969: 83). The scrappers and the circular flaked round stone (Fig. 16b, d; Fig. 17) are similar to the implements recovered from stratum 17 (Stacul 1969: fig. 47-52) i. e periods I and III respectively (Stacul 1969: fig. 55-56).

Period IV
It is the most important period of the protohistoric sequence of Swat Valley which corresponds to the pit dwelling structure of the Valley i. e the earliest settlement of Swat (Stacul 1996: 435). In Ghalegai, stratum 15 has been assigned to period IV which is best identified by hand-made, rippled rim, burnished grey-brown and black on red (comparatively small number) pottery (Stacul 1969: 62, 84).
In the Nipkhi-khel area Period IV was identified for the first time by the Italian archaeological mission during the excavation at Aligrama (just 3 km SE of EK). The earliest structural phase found in Aligrama is assigned to the period IV of Ghalegai sequence where burnished grey ware pottery, spindle whorl, black-on-red decoration and humped-bull figurines were found. (Stacul and Tusa 1977: 159, 73). Therefore, after Aligrama, EK is the second Period IV site discovered in Nikpi-khel Valley.

The most important markers of Period IV at EK are the grey-brown burnished sherds of large vases, pot-sherds with black-on-red painting, rippled rims, brown color unbaked spindle whorl, but also a humped bull figurine and black burnished vase with a cordon on its neck (Fig.8a). The second evidence is the pit structures, which can easily be seen in the cut section of the EK[3] (Figs. 27, 28).Third

[3] Dr. L. M. Olivieri and Dr. R. Micheli of the Italian Archaeological Mission kindly pointed out the presence of large pit structures visible in section in the eroded face of

evidence is provided by stone implements, from the EK (Fig. 24), which are also comparable those found in Period IV of Kalako-dherai (Stacul 1993: 78).

During the survey I collected also some microliths (Figs. 22, 18), which may probably belong to the Mesolithic period, even though it is too early to definitively assign these materials to that period.[4]

Description of the pottery

Mat impression

Majority of the bases sherds collected from EK have basket and mat impressions, which show a considerable variation in size, color and types. Some impressions are very light and seem like a simple circle on the base (fig.5b). The entire basket-made impression bases are thick, rough-ware, handmade with rough outer surfaces, brownish and grey in color. Very few in red color were also found. Some of them have their inner surface burnished.

Fig. 5a-Brown-grey, thick gritty ware, hand-made base, with basket impressions on outer surface; the inner surface has slurry like slip.

(Period III)

Fig. 5b-Red hand-made base with extremely light basket impressions, appear like simple concentric circles. The inner surface of the rim is brown and slightly smooth. . (Period III)

Fig. 5c-Gritty thick ware, handmade base with basket impressions; the inner surface is red and the outer surface is black-red. (Period III)

Fig. 5d-Red base with basket impressions on outer surface and has thin layer of brown slurry like slip on the inner surface. (Period III)

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the cliff of EK (side W). Dr. Olivieri, who visited the site by himself, ascertained that the pits are clearly comparable to those of Period IV.

[4] One of the most interesting and important find of EK is the clay button, elongated circular in shape with two small holes (Fig. 13). Similar buttons were recovered from 7000 year old settlement discovered on Marawah Island (http://www.adias-uae.com/adiasnews05-04.html).

Fig. 5f-Thick but slightly fine ware, hand-made, with basket impressions on the outer brownish-red surface and brown slip is on the inner surface. (Period III)
Fig. 5g-Base with basket-impressions, hand-made, outer surface is black and the inner surface has brown paste. (Period III)
Fig. 9, 10-Three hand-made bases, outer surfaces with basket-impressions and the inner surfaces are slipped and burnished. (Period IV)

Burnished pot-sherds
Some sherds collected from EK are beautifully burnished which show metallic luster. Majority of the burnished sherds are brown-gray, red, rarely black color with thick ware and have paste. Mostly the burnishing was carried on the rims.
Fig. 1- Pinkish potsherds with zigzag patterned burnished lines. (Period II)
Fig. 6a-Long perpendicular, handmade, greyish rim with both inner and outer surfaces are burnished.
Fig. 6b-Perpendicular rim, which with brown smooth paste on its outer surface and the inner surface has brown slurry.
Fig. 6c-Short rim, greyish-brown in color, externally projected with paste burnished outer surface which appears glossy.
Fig. 6d-Black and simple vertical burnished rim (of a bowl?).
Fig. 2b-Red ribbed rim, slightly convex internally, very fine texture, slipped and burnished both on its inner and outer surfaces. (Period II)

Rippled or Notched Rim
The rippled or notched rims are mainly grey-brown and black in colour. All the rims are handmade or slow wheel-turned, not very rough and thick, but medium size and are prepared from the mixture of sand and clay. Most of them have rough slip both internally and externally. In some cases it is lined with sandy slip. All of them are either averted or perpendicular and some have rough paste.
Fig. 7a-Perpendicular rim with close notches and slipped externally with sandy slip.
Fig. 7b-Black notched vertical rim slightly averted.

Fig. 7c-Brownish everted, notched rim with rough outer and inner surfaces.
Fig. 7d-Perpendicular rim with notches separated from each other by a small distance and has thin slip on its outer and inner surfaces.

Cord-mark impressions
Cord-mark impressions pottery is also another prominent features of EK. The potsherds having cord-mark impressions are all wheel-turned, thick ware and red in colour. Not only the body sherds but also the rims bear the cord impressions and some of them have also signs of red slip on its inner surfaces.
Fig. 2a-Thick red ware, wheel turned potsherd with seven parallel cord-mark impressions
Fig. 2b-Thick ware, wheel turned, red color potsherd which has a pattern of three parallel cord-mark impressions, two small and one large size.
Fig. 2d-Thick red ware, wheel turned rim slipped on outer and inner surfaces, having pattern of three cord-marks impressions

Painted pottery
Rarely painted-sherds were also collected from the site surface. All of them are decorated with horizontal black band on red, all wheel turned, very fine texture and red slipped. Probably few of these show floral and bird decoration, however, the sherds are very small in size due to which it is difficult to clarify these.
Fig. 4a-Red-orange, wheel-turned, vertical rim, slipped inner surface; shows blank wavy paintings with one blank broad band on the inner surface of the rim. Period II)
Fig. 15a-Externally projected, wheel-turned, complex rim with black-on-red decoration (probably bird design).
Fig. 15b-Wheel-turned body sherds with one broad black band (black-on-red).
Fig. 15c- Body sherds, wheel-turned with black-on-red decoration (probably a floral design).
Fig. 15e-Wheel-turned, vertical rim sherd with three horizontal black bands (black-on-red) on the outer surface and one black band on the inner surface.

Stone implements

During the survey a good collection of stone implements was found. The tools can be divided into two main groups

1) Chipped stone implements
2) Ground stone implements

Chipped stone implements

Chipped stone implements were mostly made from pebbles, either pebble flakes or flaked pebbles. The raw materials for stone implements were silt, granite, lime stone, quartzite, igneous rocks and other materials. Most of the chipped tools were produced through primary flaking and some by subsequent retouching (fig.16a, c). Most of the flakes are intentionally detached from the cores and have clearly bulb of percussion. Both direct and indirect percussion techniques were used. The distal sharp edges of some scrapers show notches. Chopper-chopping tools were also collected.

Fig. 14a-Ovoid pebble whose distal point end show bifacial flaking.

Fig. 14b- Dorsal surface is round pebble, the ventral surface, the right and left edges are flat by flaking.

Fig. 16b-Scraper which has notches on the sharp round distal edge and proximal end is broad for holding in fingers tightly. The dorsal surface is smooth and the ventral surface shows signs of retouch flaking.

Fig. 16d-Pointed arrow triangular flake; bears notches on its one sharp elongated side. Both the distal and proximal ends are pointed but the formal one is more elongated.

Fig. 17-Granit stone tools with alternate flaking on dorsal surface, the ventral surface is flat.

Fig. 21- Three well shaped stone tools, the upper one is made up of quartzite and the lower two are from silt.

Miscellanea

Beside the potsherds and stone implements, an incised thick red ware potsherd with thumb impression (Fig. 3c), spindle whorl and a humped bull figurine (Fig. 11), pieces of Kiln (fig. 12), clay button (Fig. 13), bone implement (Fig. 20) and small palm sized rectangular sand stone with circular depression like mortar (Fig. 23.) were also collected from the surface of the site.

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Fig. 1: Pinkish body sherds with vertical burnished pattern (period II)

Fig. 2-Cord-mark impressions bodysherd(period)

Fig. 3. Dorsal surfaces

Fig.4. Ventral surfaces of fig. 3

Fig. 5: Basket-impressions bases-sherds

Fig. 6- Burnished rims-sherds

Fig. 7. Rippled rims

Fig. 8. Vase with cordon on its neck and grey rippled rim to the right

Fig. 9. Brown burnished basket-made impression bases.

Fig. 10. Inner burnished surface

Fig.11 Spindle whorl and humped bull

Fig. 12. Pieces of kiln

Fig. 13. Clay button

Fig. 14. Chipped stone implements

Fig. 15. Painted sherds

Fig.16. Chipped stone implements

Fig. 17. Flat pebble with flaked dorsal surface

Fig. 18. Quartzite microliths

Fig. 19. Scrapers

Fig. 20. Bone implement

Fig. 21. Two silt and one quartzite tool

Fig. 22. Microliths

Fig. 23 Small mortar and pestal

Fig. 24 Ground stone implements

Fig. 25. The site seen from SSE
(Photo by L. M. Olivieri)

Fig. 26. The site seen from below (NNW)
(Photo by L. M. Olivieri)

Fig. 27. A pit of Period IV exposed in the section
(Photo by L. M. Olivieri)

Fig. 28. Another pit from the same section
(Photo by L. M. Olivieri)

Fig. 29 The top-plateau
(Photo by L. M. Olivieri)

Fig. 30 The Swat Valley from the top-plateau
(Photo by L. M. Olivieri)

-3-
Architectural and infra-structural evidence of re-use of residential units in macro-phase D, sector 11 W of Bīr-koṭ-ghwaṇḍai/Barikot.

Michele Cupitò
With a Note on Chronology by M. Cupitò and L.M. Olivieri
and an Additional Note on the Excavations by L.M. Olivieri

1. Aims of the study

Our investigations on the stratigraphy and architecture of Period IX of Bīr-koṭ-ghwaṇḍai/Barikot (from now on Barikot) focused on the analytic study of one of the main feature of this phase: the widespread and intense re-use and reutilization of architecture, single compartments and even whole residential units.

The aim of the study was to identify, survey, typologize and – whenever possible – to give a functional interpretation of each body of evidence, in order, on the one hand, to recognize similarities, differences and recurrent building techniques, and, on the other hand, to contextualize the evidence in new models of spatial organization of this part of the ancient city.

In the meantime, we carried out a systematic sampling of the main identified contexts for ^{14}C analyses, in order to refine the absolute chronology of the last phases of occupation[1].

2. General framework of the evidences

Generally, the elements testifying architectural re-use in Period IX are the following four:

1) building techniques and structural features with a high degree of internal homogeneity, but clearly poorer in quality compared to the buildings of Periods VII-VIII. Specifically, recurrent elements are:

- the re-use of stone elements – not selected nor sorted –

[1] This Article, as well as the annexed Nots are a different version of two chapters of the Excavation Report, which was in press at the time this pages were composed (Olivieri, ed., in press). Photos, if not differently indicated are by MC. The analysis of the cultural horizon of Periods X and IX has been addressed in detail by P. Callieri in his paper on the BKG post-Kushan phases (Callieri 2010).

belonging to buildings of previous phases, both still installed and already collapsed, to build little drywalls (sometimes with clay as binding), small embankments and curbs, paved and pebble roads, bases for poles and/or wooden pillars, different types of fire installations;

• the re-functionalization of the remaining walls (levelling operations, wall plugs, new openings, installations of poles and/or wooden pillars, etc.) and also, even though at a lesser extent, of the collapsed structures (curbs, embankments);

2) building types with very simple plans and elevations. These types have a very limited variability, as they can be attributed to two main models:

• from sub-rectangular to sub-elliptical spaces, with a single compartment, placed against the levelled or collapsed perimetral walls of Period VII-VIII buildings. The walls of these compartments are made in perishable materials, with a low base in drywall and also a perishable roofing resting on poles and/or wooden pillars, put in place on slabs or blocks of stone, or, less frequently, as post-holes with little slabs as wedges;

• from sub-rectangular to sub-elliptical structures, with a single compartment, linked to buildings of the previous phases, with walls and roofing entirely made of perishable materials, supported by poles and/or wooden pillars put in place on slabs or blocks of stone, or, less frequently, in holes with wedges;

3) structures and accessory installations, preferably – but not necessarily – linked to the main areas, with highly variable building techniques, although they can be attributed to two main functional categories:

• fire installations made of stone slabs or cobbles vertically embedded into the ground and/or shaped as a box, sometimes with temporary coatings (slabs of fired plaster coming from walls or dome-like roofings) and linked to areas subjected to fire and to dumps with ashes, charcoals and animal bones. These structures

seem to be hearths or ovens;

• installations made of a paved area with a big jar in the centre sunk into the ground. The jar emerges from the ground from the point of maximum expansion upward. These structures might have been be used for storing food or water;

4) wide distribution of the described features in the whole studied area, but with a clear concentration in the areas near the wide road that runs along the inside of the western part of the defensive wall (locus 10).

3. Analysis and interpretation

The description of the analysed contexts will proceed from N to S, starting from Sectors 1-2. The single structures will be called Str. (as for "Structure") followed by their locus and progressive number. In the case of localized deconstructions (i.e., removal of architectural parts or elements for building new ones) of walls or holes for the installation of vertical wooden elements – that is to say a negative context/cut – the ID number will be preceded by a minus (-) sign *(fig. 1)*.

Fig. 1 - General BKG 11 W - Sectors 1-2 plan; in red the loci with evidences of reuse and refuntctionalization; in blue: the street that runs along the western defensive wall.

3.1. BKG 11 W - Sectors 1-2

3.1.1. Locus 3

The northern wall of a medium-sized quadrangular space has two localized de-constructions, at the N-E and N-W corners, probably for the installation of poles or wooden pillars. The installation in the N-E corner (Str. -3.1) (*fig. 2*) is well made: it involved the removal of some wall blocks in order to create the space for the erection of a vertical log, probably re-depositing some of the stones as wedges. In the NW (Str. -3.2) (*fig. 3*) corner this change had a more substantial impact, through the removal of slabs and blocks for creating a larger installation space. These changes were meant to erect a roofing, made of perishable materials and are probably linked to the higher paved area with a border curb, placed in the southern corner of the space (Str. 3.3). However, the function of this structure – not the only one of this type in BKG 11 W – is still unclear.

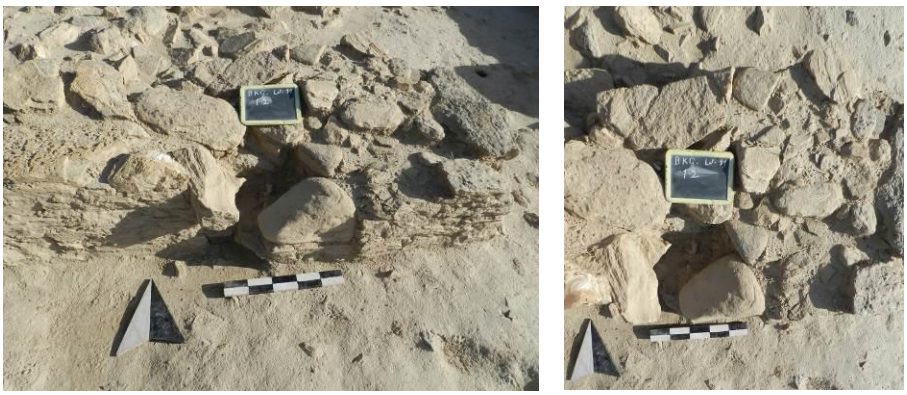

Fig. 2 - Locus 3 - Details of the installation of a pole or wooden pillar in the N-E corner of the compartment (Str. -3.1).

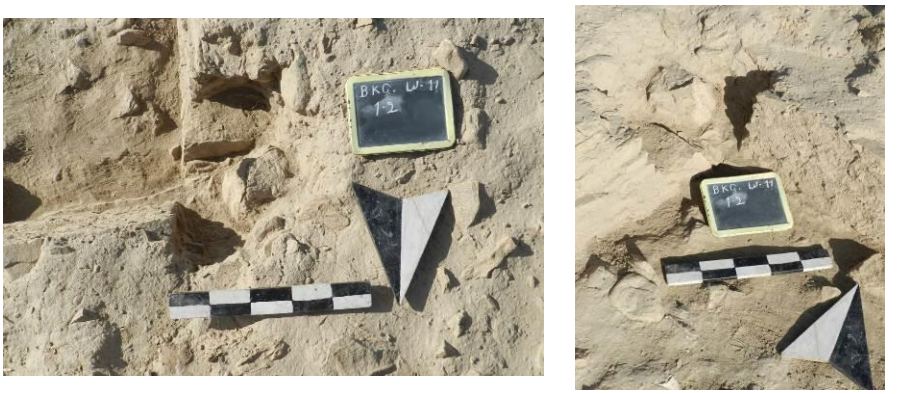

Fig. 3 - Locus 3 - Details of the installation of a pole or wooden pillar in the N-W corner of the compartment (Str. -3.2).

3.1.2. Locus 16

The walls of Locus 16 (*fig. 4*) are collapsed, but probably they had also been the subject of a deconstruction event. A low little semi-circular drywall, stemming from the remains of the southern wall, closed the SW corner (Str. 16.2) of this area; the building technique is less accurate than the one used in the previous phases. A fire installation abuts the northern wall – in the middle of the western section of it. This installation has fired plaster slabs *in situ* or just slightly displaced – fragments of andirons, or, maybe, fragments of the cover of an oven – and a wide scatter of ashes, charcoals, clasts of clay reddened by fire, and animal bones (Str. 16.1).

Overall, the structure seems a small dwelling hut, leaning against the remaining walls and the ruins of a Period VII-VIII building, already decayed. The walls have a low stone base and an elevation made of perishable materials. Given the absence of both holes and stones as bases for poles/pillars, the roofing should be made of very light perishable materials (twigs, branches, mats). The fire installation has no evidence of craft activities; the abundance of animal bones nearby suggests it was used for cooking food.

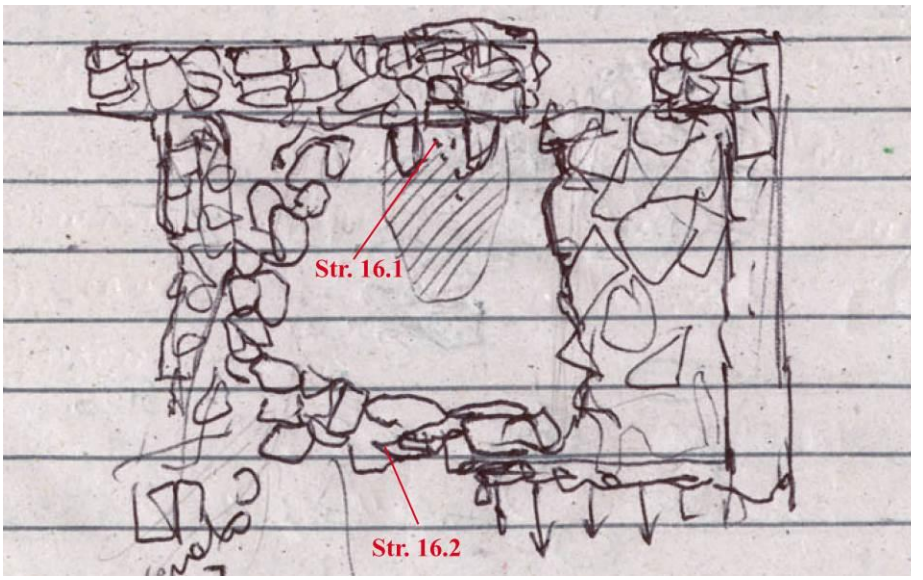

Fig. 4 - Locus 16 – Planimetric sketch oh the hut with drywall (Str. 16.2) and internal hearth for the cooking of food (Str. 16.1).

3.2. BKG 11 W - Sectors 3-4

3.2.1. Locus 28

Two fire installations were identified along the western side of locus 28, a large open area. Each installation is located at the starting point of two walls that, running parallel to the long side of the compartment, define the three-naves plan. Such fire installations do not seem linked to other structures.

The first feature (Str. 28.1) (*fig. 5*), placed in the northern corner, is a slight depression covered with cobblestones and delimited by larger stones. There are clear signs of fire on the internal face of the wall: both the stone elements and the clay used as mortar look damaged by the flames.

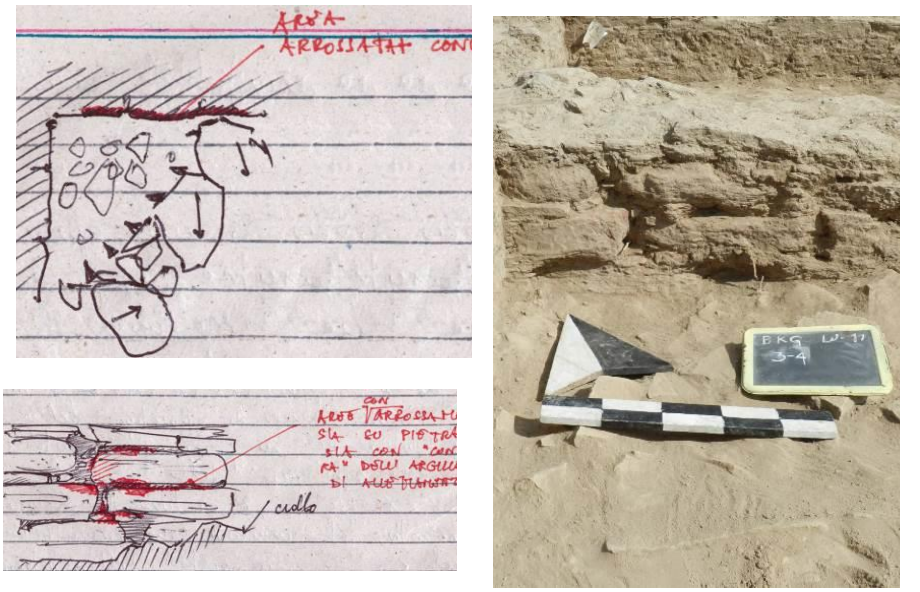

Fig. 5 - Locus 28 - Left: planimetric sketch and perspective drawing of the wall subjected to fire and the hearth placed in the northern corner of the compartment (Str. 28.1); Right: photographic detail of Str. 28.1.

The second one (Str. 28.2) (*figg. 6-7*), in the southern corner, has a more complex structure. It has a rectangular box-like shape, opening towards East, with an L-shaped curb, made of slabs embedded vertically, and a regular inner surface, made of large and small stone slabs. Inside, there are many clasts and flat fragments of clay and red plaster fragments, probably the result of intensive firing activities. We cannot rule out the possibility that these are fragments of andirons and/or clay covers.

A practice of maintenance, or periodic renovation, of similar infrastructures is hinted by clasts and flat clay slabs altered by fire, even below the clay surfaces, as well as by the cleanliness of the surface itself. Further traces of fire are visible outside the installation, particularly in the corner of the L-shaped curb. Near the central part of the W wall of the large room of Period VII-VIII, there is a substantial dump of ash, charcoal and animal bones, left by the two installations. These latter, too, were linked to food preparation activities.

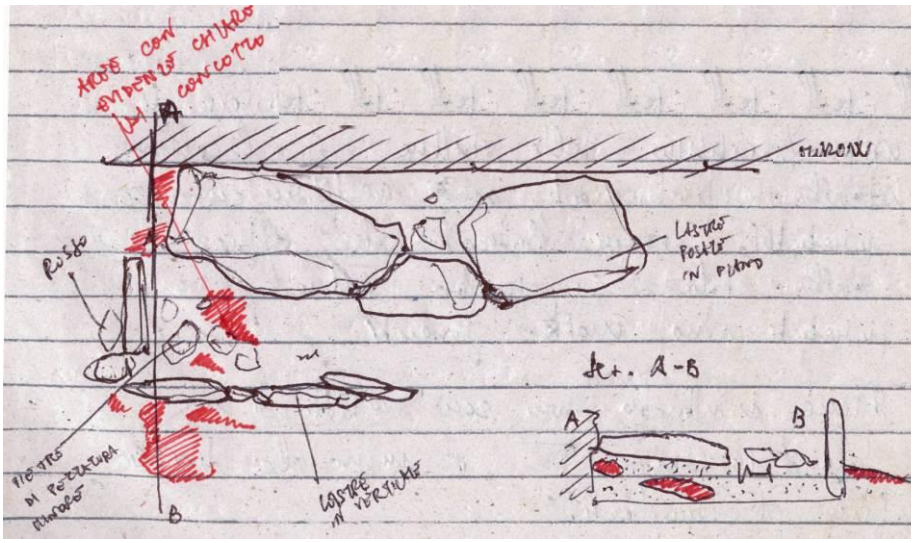

Fig. 6 - Locus 28 - Planimetric sketch of the box-shaped hearth placed in the southern corner of the compartment (Str. 28.2).

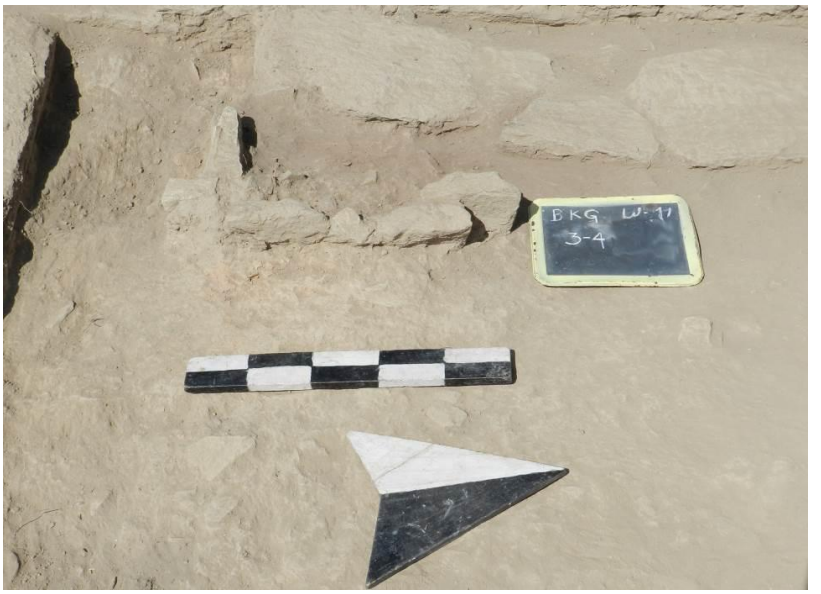

Fig. 7 - Locus 28 - Overview of the box-shaped hearth placed in the southern corner of the compartment (Str. 28.2).

3.2.2. Locus 34bis

Locus 34bis is a small square space, with collapsed walls and an opening towards East that was already closed during Period VII-VIII. In the central part of locus 34bis there is a kind of sub-elliptical plinth, elongated, with two quadrangular recesses on top (Str. 34bis.1) (*figg. 8-9*). This structure is made by overlapping layers of small stone slabs without mortar; although this building technique is very different from the one used in the previous phases, it still looks very accurate and regular. Probably it is the base for the installation of two poles or wooden pillars, very close to each other, whose function was to support a roofing made of perishable materials. The new use of this space after its evident re-functionalization is not clear.

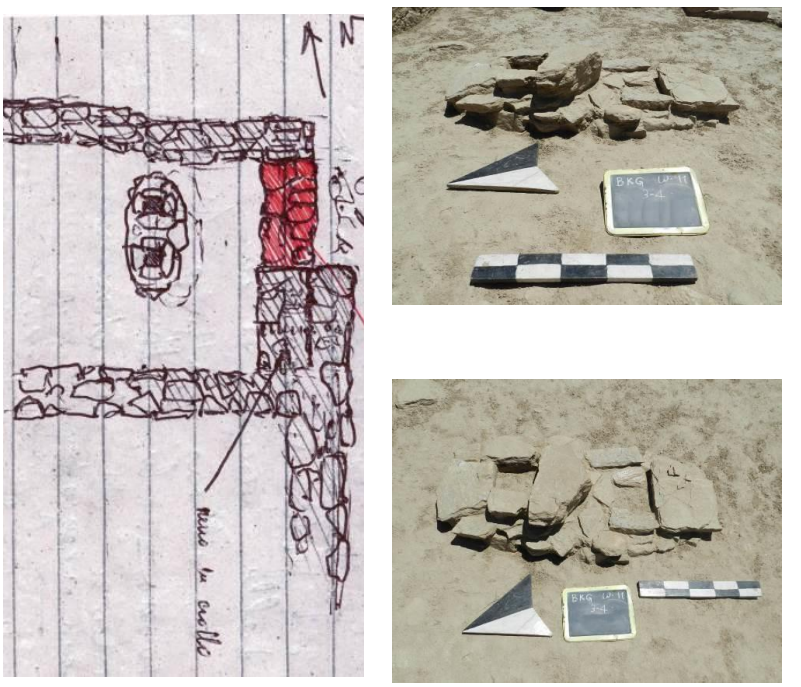

Fig. 8 - Locus 34bis – Left: planimetric sketch of the compartment with the plinth , with two quadrangular recesses on top for the installation of a pair of wooden pillars (Str. 34bis.1); right: photographic details of Str. 34bis.1.

Fig. 9 - Locus 34bis – Particular of the plinth , with two quadrangular recesses on top for the installation of a pair of wooden pillars (Str. 34bis.1).

3.2.3. Locus 36-40

Loci 36 and 40 will be discussed together, since they probably belong to a single housing unit, with a complex spatial organization. Though the descriptions will be separate, for the interpretation we will jointly consider them as a single locus 36-40. Locus 36 is a long and narrow rectangular space, next to locus 40, with collapsed walls in which, in the N-W corner, was installed a pole or wooden pillar (Str. -36.1) (*fig. 10*). Locus 40 is a medium-sized rectangular space, with a wide opening towards S, endowed with a central pillar. The walls are heavily deconstructed, in particular, there is a large opening in the northern wall meant to connect this area to the neighbouring locus 36. There are also installations for wooden vertical logs. A deconstruction is visible in the

N-W corner of the walls (Str. -40.5) (*fig. 10*) and two holes, with small stone slabs as wedges, were placed near the jambs of the southern access (Strr. -40.6 and -40.7). The features distinguishing locus 36-40 from the ones analysed so far are, on the one hand, a fire installation (Str. 40.1) and a probable storage area (Str. 40.3) placed at the passage between locus 36 and locus 40; on the other hand, a small accessory structure, with a small inner fire installation, in front of the large opening South of locus 40, partly leaning against it (*fig. 11*).

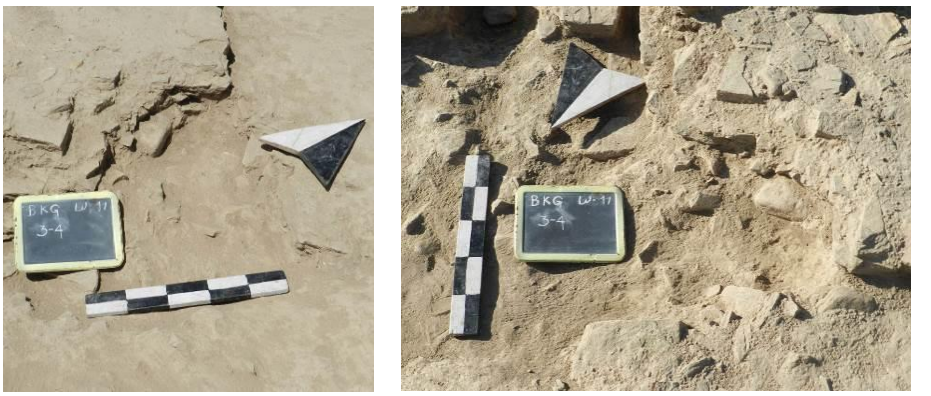

Fig. 10 - Locus 36-40 - Left:photographic detail of the deconstruction of the wall for the installation of a pole or wooden pillar in the N-W corner of locus 36 (Str. -36.1); right:similar structure placed in the N-W corner of locus 40 (Str. -40.5).

The fire installation (Str. 40.1) (*figg. 12-13*) near the N-W corner of locus 40, is simply made of a small sub-elliptical hole with a slab exposed to fire placed flat and two large rectangular stone blocks placed at the sides of the hole, on a base made of little stone slabs and clay. The structure is delimited, right and left, by large slabs vertically sunk into the ground. The central hole contains ashes and charcoal, and is linked to a wide scatter of charcoal, fired clay bits and few animal bones inside locus 40; there are clear traces of fire, including fired stone slabs, in the whole structure.

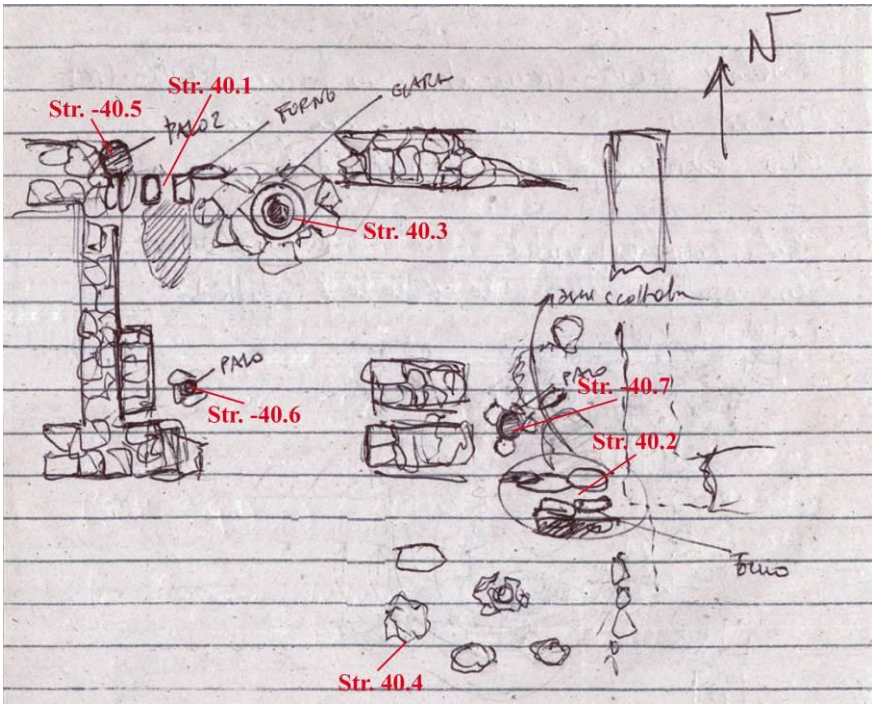

Fig. 11 - Locus 36-40 - Planimetric sketch of the compartment with the different evidences identified: the localized deconstruction for the installation of a pole or wooden pillar in the N-E corner (Str. -40.5); the functional unit made up of the fire installation (Str. 40.1) and the storage area (Str. 40.3); two postohles with stone wedges placed near the southern opening (Strr. - 40.6 and -40.7); the external accessory structure with an L-shaped curb made of stones and pole bases (Str. 40.4); the fire installation belonging to the accessory (Str. 40.2).

The probable storage area (Str. 40.3) (*figg. 13-14*) is placed in the passage between locus 36 and locus 40, near the fire installation; it is a sub-circular paved area with a big ovoid jar in the middle, sunk into the ground.

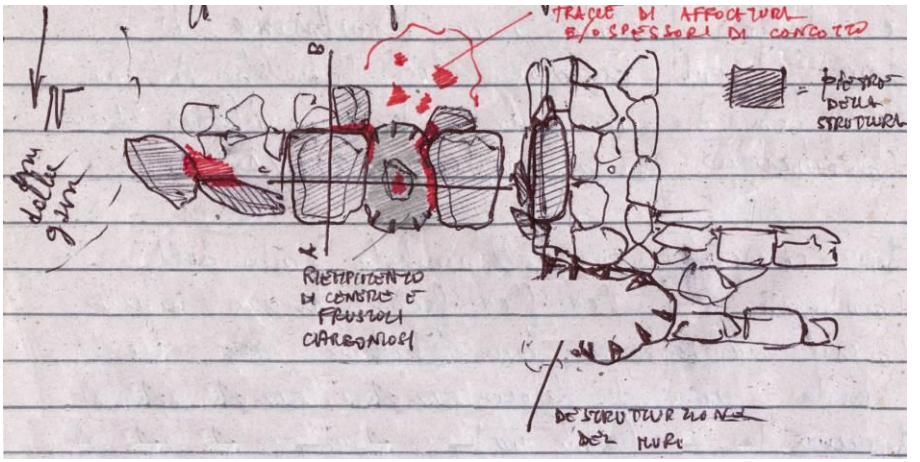

Fig. 12 - Locus 36-40 - Planimetric sketch of the fire installation placed at the passage between locus 36 and locus 40 (Str. 40.1).

Fig. 12 - Locus 36-40 – Photographic detail of the fire installation placed at the passage between locus 36 and locus 40 (Str. 40.1).

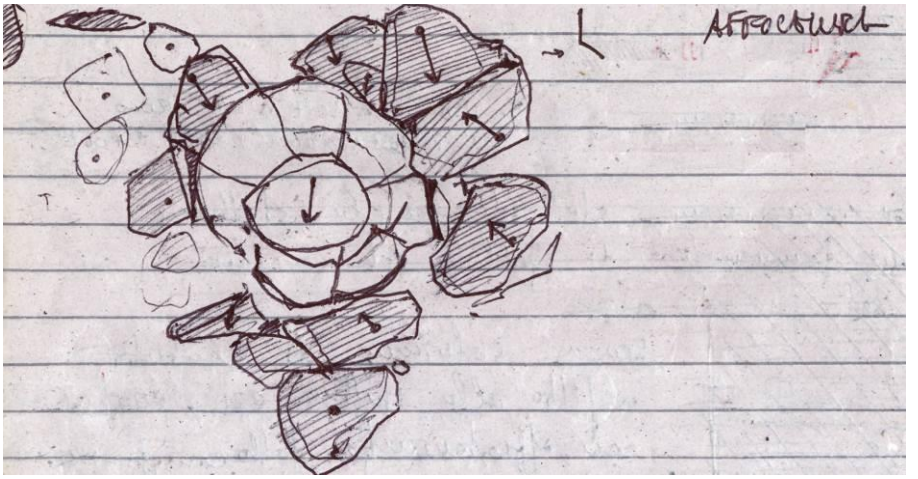

Fig. 13 - Locus 36-40 - Planimetric sketch of the storage area placed at the passage between locus 36 and locus 40 (Str. 40.3).

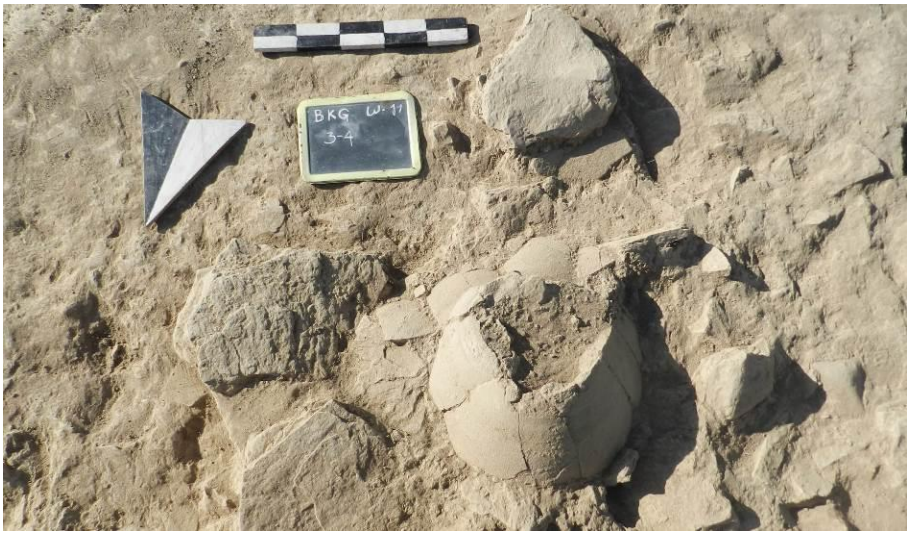

Fig. 14 - Locus 36-40 - Photographic detail of the storage area placed at the passage between locus 36 and locus 40 (Str. 40.3).

Fig. 15 - Locus 36-40 – Overview of the functional unit made up of fire installation plus storage area placed at the passage between locus 36 and locus 40 (Strr. 40.1 and 40.3).

Fig. 16 - Locus 36-40 - Overview of the functional unit made up of fire installation plus storage area placed at the passage between locus 36 and locus 40 (Strr. 40.1 and 40.3).

The large accessory structure in front of the entrance to locus 40 (str. 40.4) has a quadrangular groundplan, and a short L-shaped curb made of stone blocks and slabs vertically embedded in the ground. A series of stones set flat originally supported poles or wooden pillars. Inside, in the middle of the small room, a small hole with stone wedges is another installation for a wooden vertical log (*figg. 11 and 17*).

Fig. 17 - Locus 36-40 - Overview of the southern external accessory structure with L-shaped curb made of stones and bases for poles (Str. 40.4);in the background, its pertaining fire installation (Str. 40.2).

At the N-E corner there is a second fire installation (Str. 40.2) (*figg. 18-*

19) : a soil surface reddened by fire, delimited by a series of vertical slabs; and an alignment of stones placed flat, parallel to the slabs. This structure, unlike the others in the same area, had no ash, charcoal or animal bones.

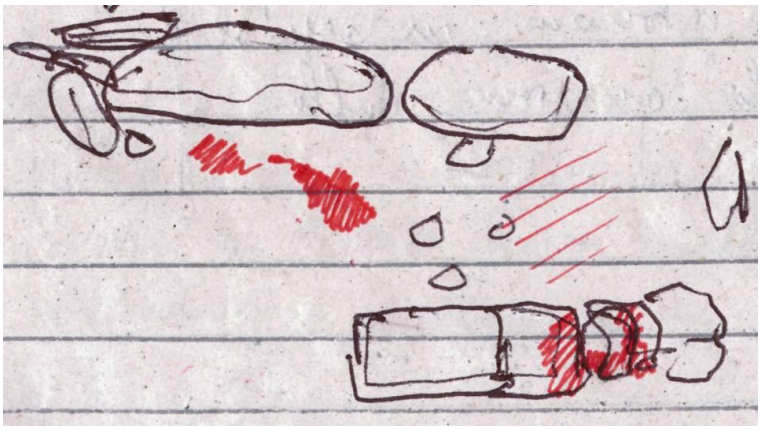

Fig. 18 - Locus 36-40 – Planimetric sketch of the fire installation belonging to the external accessory structure (Str. 40.2).

Fig.19 - Locus 36-40 – Photographic detail of the fire installation belonging to the external accessory structure (Str. 40.2).

The re-use and re-functionalization of loci 36-40 – that is to say a large reorganization of the spaces and the installation of new

erections and roofings in perishable materials, supported by poles or wooden pillars – made a new housing unit, with a certain degree of articulation of the inner spaces, also from the functional point of view. The new dwelling seems to have developed in three parts: a sort of courtyard with what seems to be the main entrance on the East, and a small accessory quadrangular space (a porch?) with a fire installation; the main room – locus 40 – with a well constructed hearth for food preparation and cooking near to a storage area (for food, or, less likely, water); and finally a smaller compartment – corresponding to locus 36 – linked to the main compartment, as an accessory space.

3.2.3. Locus 37bis

Locus 37bis is a small space with levelled, voluntarily deconstructed walls in order to create new openings, with features similar to what already reported for locus 16 and 36-40 (although the latter is far more complex). Inside this small unit, part of a larger dwelling, an alignment of large vertical slabs oriented N-S - and in axis with the large opening on the northern wall – delimits a sub-quadrangular space, corresponding to the eastern half and the S-E corner of the space itself.

This area is even better defined by two installations for wooden vertical logs – more precisely, a localized deconstruction in the southern wall (Str. -37bis.2) and a hole for a pole or a wooden pillar with stone wedges near the slab placed further N (Str. -36bis.3). It also has a paving built with some care (Str. 37bis.4) and a fire installation (Str. -36bis.5) (*fig. 20*).

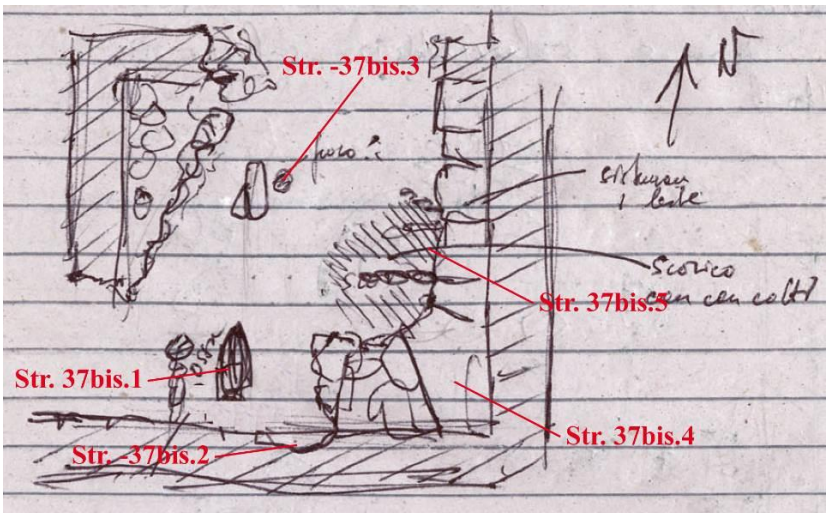

Fig. 20 - Locus 37bis – Planimetric sketch of the compartment with the different evidences identified: the slabs alignment oriented N-S (Str. 37bis.1);the deconstruction for the installation of a pole or wooden pillar placed in the N-E corner (Str. -37.2);the posthole with stone wedges placed near the northern slab of the alignment (Str. -37bis.3);the angular paved area in the S-E corner (Str. 37bis.4); the fire installation leaning against the paved area (Str. 37bis.5).

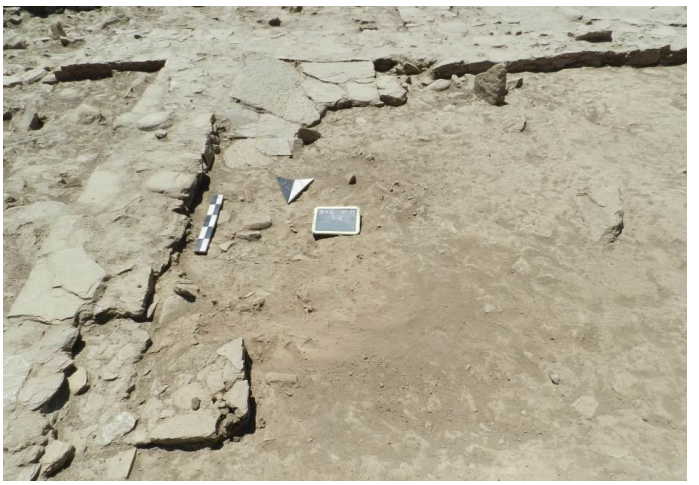

Fig. 21 - Locus 37bis – Overview of the compartment during the excavations we can see the slabs alignment oriented N-S (Str. 37bis.1), the angular paved area (Str. 37bis.4) and the fire installation leaning against the paved area and still partly covered by its pertaining dump filled with ashes, charcoals and animal remains (Str. 37bis.5).

The paving (Str. 37bis.4) (*fig. 21*) is adjacent to the eastern wall and the S-E corner of the compartment. It is made of quadrangular large slabs - or fragments of large slabs -, without doubt a result of re-use. This surface, quite regular and well built, might have been part of a previous, better fashioned building. The fire installation (Str. 37bis.5), rather poorly preserved, is a small box opening towards the interior, made of slabs vertically set in the ground and placed against the paving leaning against the eastern wall. The entire area belonging to this structure is occupied by dumps full of ashes, charcoal, fragments of fired plaster and animal bones (*fig. 21*).

From a functional viewpoint, also this structure, like the one identified in locus 16, seems to be the basement of a small housing hut, with walls and roofing entirely made of perishable materials. The limited evidence of poles or wooden pillars imply the use of very light materials, as twigs, branches, mats or other similar items. Regarding the fire installation, the absence of specific indicators of craft activities and the abundance of animal bones suggests, once again, that it was used for preparing and cooking food.

3.3. BKG 11 W - Sectors 5-6

3.3.1. Locus 43-58

Like loci 36-40, loci 43 and 58 will be discussed together. Indeed, they belong to the same housing unit that shows a certain degree of complexity and monumentality. Though separately described, they will be discussed as loci 43-58 for the purposes of interpretation (*fig. 22*).

Locus 43 is a rectangular space, long and narrow, adjacent to locus 58. It shows clear signs of spatial reorganization and re-functionalization, in the context of a clear and drastic planned transformation of this entire area of the city. In the western part of the compartment - significantly corresponding to a deconstruction of the wall the divides from East to West locus 45 from locus 58, creating an opening between the two compartments – there is a kind of rectangular ramp, paved and delimited on three sides by a curb made of stone blocks and slabs. This ramp is probably a doorstep (Str. 43.1).

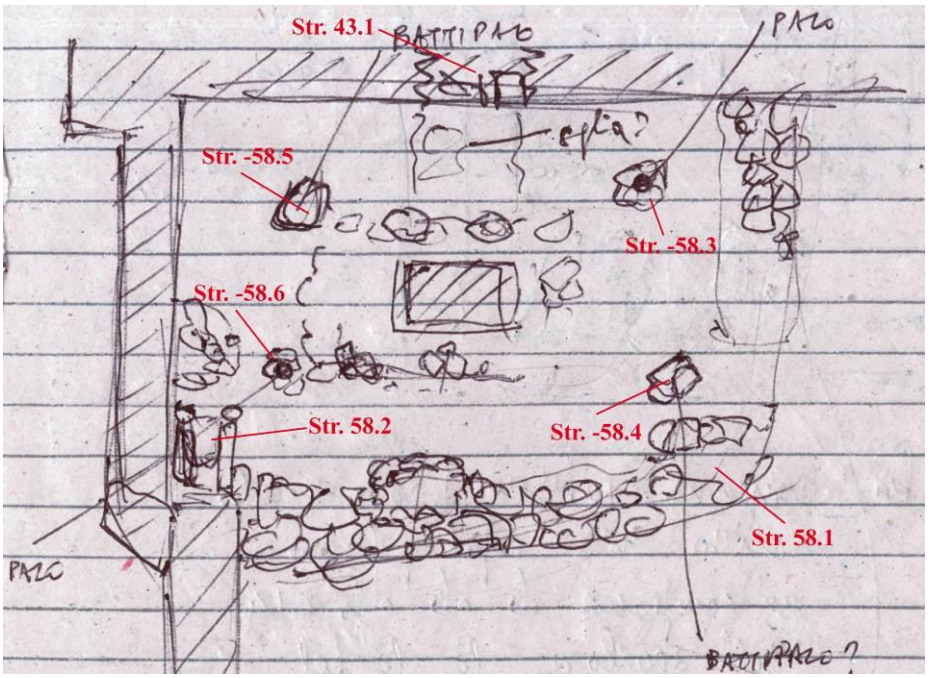

Fig. 22 - Locus 43-58 – Planimetric sketch of locus 58 with the different evidences identified: the probable doorstep of locus 43(Str. 43.1); the L-shaped drywall delimiting the structure(Str. 58.1); at least four holes with wedges and stone bases for the installation of poles or wooden pillars, placed around the base of the central masonry pillar (Strr. -58.3, -58.5, -58.6, -58.7); the internal box-shaped hearth (Str. 58.2).

Slightly to the E, where a low stone curb meets the wall that divides loci 43 and 48, there was a large ceramic jar, placed in a hole in the ground. The jar has neither rim nor shoulder, and could be thus used for collecting and storing rainwater (Str. 43.3) (*fig. 23*).

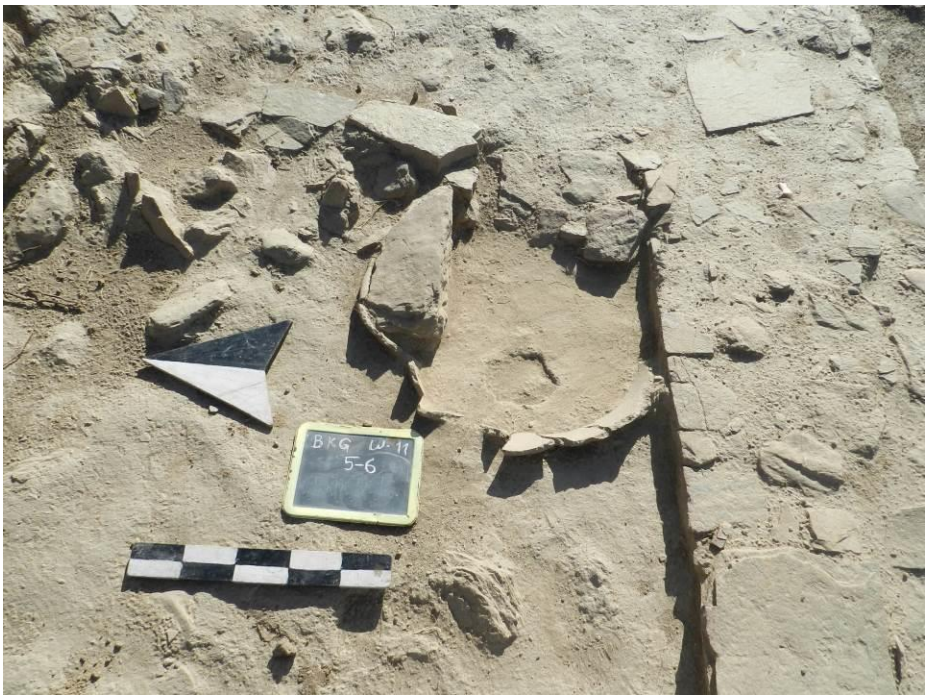

Fig. 23 - Locus 43-58 – Photographic detail of the probable installation for harvesting and storing rainwater (Str. 43.3).

Locus 58 is a large courtyard, probably open air, of an important residential building. In the N-W corner there is a housing structure with a low stone base and walls in perishable materials. Despite its simple plan, this structure is a significant *unicum* in that context of re-use of this part of the ancient city.

The L-shaped drywall delimiting the compartment (Str. 58.1) (*figg. 24-25*) is definitely larger and thicker than the norm. Its building technique, although less accurate than those of the buidings of Period VII-VIII, shows a certain care, as in, for example,the regular juxtaposition of pairs of sorted large blocks in the lower courses of the facing. In the central part of the compartment there are four – or more probably six – holes with stone wedges and stone bases for wooden poles or pillars (Strr. -58.3) regularly arranged around a quadrangular plinth - the probable base of a large demolished pillar built in Periods Period VII-VIII. Two further installations for vertical logs are

respectively located in the western wall of the courtyard, not far from the N-W corner (Str. -58.4) and in the stone base delimiting the new structure where the latter meets the western wall (Str. -58.5).

Fig. 24 - Locus 43-58 – Overview from N-E of the structure during the excavations; close up we can clearly see: the curb partitioning locus 43 (Str. 43.2); the adjoining structure for harvesting and storing rainwater (Str. 43.3); the entrance to locus 58 with a ramp delimited by stones (Str. 43.1); we can also identify: the L-shaped drywall delimiting the structure (Str. 58.1) and, in the center, around the base of the masonry pillar, some of the stone bases for wooden poles (in particular Str. -58.3).

Moreover, in this point, a complex fire installation leans against the corner (Str. 58.2) (*figg. 26-29*). This installation is a rectangular box made of large stone slabs set vertically in the ground. It has an opening, facing North, delimited by two stone blocks. Large fragments of smooth and regular fragments of fired plaster were found, arranged in a circle in the central part of the installation, leading us to think that, as already hypothesized for other similar structures, it had andirons or a dome cover. Inside the installation, near the opening, there are dumps filled with ashes, charcoals and animal remains. Outside the housing unit, towards South, we finally identify a large irregular paved area, whose building technique is rather shallow (Str. 58.6).

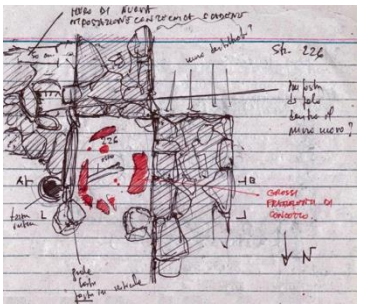

Fig. 25 (left) - Locus 43-58 – Overview from N of the structure during the excavations; in the front we can see the entrance to locus 58 from locus 43, preceded by the ramp delimited by stones (str. 43.1), the southern side of the L-shaped drywall delimiting the structure (Str. 58.1) and, in the center, around the base of the masonry pillar, some of the stone bases for wooden poles (in particular Str. 58.5).

Fig. 26 (right) - Locus 43-58 – Planimetric sketch of the box-shaped hearth leaning against the western wall of locus 58 (Str. 58.2); in the center, we can see large fragments of "concotto" with flat and smooth surfaces, placed in a circle, that can be interpreted as the remains of mobile elements such as andirons or covers.

Figs. 27 - Locus 43-58 (caption in the next page).

Figs. 27-28 - Locus 43-58 - General view from the N-E (above) and N (below) of the box-shaped hearth (Str. 58.2); we can see the two large blocks delimiting the entrance of the structure and the internal "concotto" elements.

Fig. 29 - Locus 43-58 - General view from above of the box-shaped hearth (Str. 58.2); we can see the two large blocks delimiting the entrance of the structure and the internal "concotto" elements.

From the functional point of view, as already mentioned, though

this structure has a simple plan, rather poor materials and building techniques, it can nonetheless be interpreted as a high ranking house. Indeed, besides being larger than the norm, with imposing walls, it has also an inner spatial articulation that sets it apart from the usual models of single rooms. In the general plan we can identify a sort of entrance – maybe open air – with a paved entry, probably aimed at collecting and storing water (locus 43); and a main compartment, rather big and spacious, whose walls have a base in drywall and elevations in perishable materials, as well as the roofing, supported by poles and wooden pillars, placed in their installations in the perimetral walls, or in wedged holes or on stone basis in the central part of the compartment. In the main compartment there is also an angular fire installation that, since there are no traces of craft activities, whereas animal remains are widespread, was a hearth or oven for preparing and cooking food.

3.4. BKG 11 W - Sectors 7-8

3.4.1. Locus 63

Locus 63 is a large rectangular space that is undoubtedly part of a broader complex. A fire installation is located in the S-E corner of locus 63, very similar to the other ones identified in this part of the city (str. 63.1) (*fig. 30*). It is a box made of stone blocks and slabs, leaning against the Period VII-VIII walls, with an opening facing West, delimited by two bigger blocks. Inside the fire installation, besides ashes, charcoal, fired clay particles and rare animal bones, there are some large fragments of fired plaster with smooth and flat surfaces. These items probably belong to mobile elements such as portable heathers or mobile covers. A large oval dump, along the southern side, contains ash, charcoals and animal bones, clearly the result of the activities carried out in the firing feature. In this case, too, we hypothesize that the fire installation was used for preparing and cooking food.

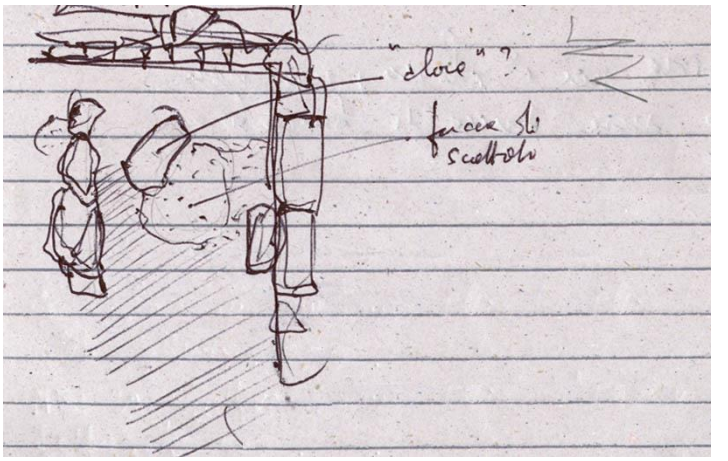

Fig. 30 - Locus 63 – Planimetric sketch of the box-shaped hearth leaning against the S-E corner of the compartment (Str. 63.1);in the center, we can see a large fragment of "concotto" with flat surfaces that migth belong to mobile elements such as andirons or covers.

3.4.2. Locus 68

Locus 68, adjacent to locus 63, is made up of a series of small adjoining quadrangular compartments. Evidence of re-use and re-functionalization was significantly found only inside the L-shaped space in the S-W part of the locus.

Five bases for the installation of poles or wooden pillars (Strr. - 86.1) were placed at the two entrances. The basis are made of stone blocks and juxtaposed slabs. Leaning against the southern wall there are two quadrangular structures (Strr. 68.2 and 68.3) with stone blocks and slabs that, although not exposed to fire and free from ashes or charcoal, are similar to the hearths shaped as stone boxes. Moreover, in correspondence with the centre of the western wall, there is a large semi-circular dump filled with ashes and charcoal; many animal bones were found near the eastern entrance of the building.

Although, due to the progress of the excavation, the survey was partial, we can hypothesize that a re-use with a residential purpose took place also in locus 68, through new erections in perishable materials and the construction of fire installations for food processing.

4. Results

The study of re-use and re-functionalization of architecture in Period IX in this part of the city of Barikot sugegsts that the phenomenon was chronologically and structurally unitary; indeed, as we saw, the building techniques and typologies are quite homogeneous[2]. Furthermore, we noticed that:

1) comprehensively the phenomenon seems chronologically and structurally unitary; indeed, as we saw, the building techniques and typologies are strongly homogeneous;

2) all the identified changes, regardless of their entity and their respective building techniques, took place when all walls had already collapsed and levelled. The alterations often resulted in a further destructuring and exploitation of the collapsed structures. This is why the collapsed structures are particularly difficult to identify after the defunctionalization of the Period VII-VIII buildings;

3) regardless of their entity and building technique, all actions were inspired by a voluntary re-occupation and re-use of limited portions of the pre-existing houses – generally a single room – and by the systematic building of houses and of huts with the function of dwelling units; all the identified fire installations, in fact, can be interpreted as simple hearths or ovens for cooking food;

4) the making of new openings – through demolition or partial deconstruction of the walls – with a different orientation, compared to Period VII-VIII, suggests that generally the urban planning had lost its importance and could not influence anymore the choices of the residents. Nonetheless, there are some infrastructural key elements - such as the big road the runs along the internal façade of the large W wall (locus 10) or orthogonal secondary roads (loci 25N and 78) – that remained in use as a center of attraction for the

[2] A further study of the causes that led to the abandonment of the city, as well as the reassessment of the social environment of Period IX is going to be published in two articles in the *Journal of Inner Asian Art and Archaelogy* (Olivieri 2013, Id. in press).

settlement;
5) despite the contextual differences, the identified processes have some interesting similarities with phenomena of re-functionalization and/or re-occupation of urban areas and /or *villae* known for both the *Pars Occidentalis* of the Roman Empire and – though in different moments – the *Pars Orientalis* since the 5th Century AD. Significantly, the analogies are encountered in periods of generalized socio-political crisis and global economic reorganization.

A Note on the Chronology (by M. Cupitò and L.M. Olivieri)
The survey of the evidence of re-use and re-functionalization in Period IX at Barikot has also remarkable consequences for chronology, since we carried out a systematic sampling of these levels for 14C analyses over a surface of less than 1 ha. Shown below is the complete table of the collected samples, with the indication of their topographic and stratigraphic position, and their typology:

Topography	**Stratigraphic position**	**Sample type**
Sectors 1-2, Locus 16	Str. 16.2 ("box-shaped" hearth)	Bone fragment
Sectors 3-4, Locus 37bis	Occupation level	Bone fragment
Sectors 5-6, Locus 54	US393 (dump with animal remains)	Bone fragment
Sectors 5-6, Locus 58	Str. 58.2 ("box-shaped" hearth)	Bone fragment
Sectors 7-8, Locus 63	US101 (dump with ashes)	Bone fragment
Sectors 7-8, Locus 68	US30 (occupation level)	Bone fragment

Five of the six collected samples have already been processed. Shown below is the table with the sequence of the resulting dates – calibrated, with a 2s error – sorted in ascending order, from the oldest to the most recent:

Topography	**Calibrated dates (2s)**
Sectors 7-8, Locus 63	70AD (94.3%) 260AD; 300AD (1.1%) 320AD
Sectors 3-4, Locus 37bis	70AD (89.4%) 260AD; 280AD (6.0%) 330AD
Sectors 5-6, Locus 54	80AD (1.2%) 110AD; 120AD (94.2%) 340AD
Sectors 5-6, Locus 58	120AD (95.4%) 350AD
Sectors 7-8, Locus 68	220AD (95.4%) 420AD

The results will require an in-depth analysis, but already support the following preliminary comments. Given the level of confidence of a 2s error, the oldest dates – that perfectly coincide – come from the dump filled with ashes, charcoals and animal remains, context 101 of locus 63 and from the occupation level of locus 37bis. They respectively date to 70AD (94.3%) 260AD and 70AD (89.4%) 260AD. The most recent date, instead, comes from the occupation level, context 30 of locus 68, 220AD (95.4%) 420AD. The other intermediate dates – in excellent agreement, too – come from the dump filled with animal bones, context

393 of locus 54 and from the box-shaped hearth in locus 58, respectively 120AD (94.2%) 340AD and 120AD (95.4%) 350AD. On the whole, the dates fall between the end of the 1st – beginning of the 2nd Centuries AD and the beginning of the 5th Century AD.

However, if we consider the single calibration graphs, and specifically the ones with a 1s error level, we notice how the main chronological range dates between the half of the 2nd and the half of the 4th Centuries AD. This evidence not only confirms the historical unity of the re-use and re-functionalization phenomenon and its relative short duration, but also indicates how this event took place significantly at the same time of the large expansion of the Sasanian Dynasty that towards the end of the 3rd Century AD conquered Gandhara, turning it into the Kushanshahr province of the Sasanian Empire.

The new chronology matches what Callieri originally proposed for the latest urban phases of trench BKG 1 (Period VII, 3rd century AD; Callieri 1990, p. 687). Later Callieri proposed for these phases a 4th-5th century AD chronology (Callieri et al. 1992; Callieri 2010) in connection with the presence of sub-Kushan and Kushano-Sasanian coins (MacDowall and Callieri 2004; Callieri 2010; see also MacDowall 2006). The abandonment of the town was consequently attributed to the early 6th century AD (Callieri 2010: 377). However, it must be said that these later chronologies could still be valid for the abandonment of more central zones of the ancient town (unexplored).

Additional Note on the Excavation (by L.M. Olivieri)

The excavated area, the subject of the present article, lies at the North-end of the trench BKG 4/5 dug in 1990-1992 (see above; Callieri et al. 1992; Olivieri 1993). The new area was selected with the aim of exposing the largest possible area of the ancient city within the original limits provided by the South and West segments of the city wall. The area is labeled BKG 11.

Fig. 31 - Trench BKG 11 seen from NNW; in the background, Mt. Ilam. (Photo by LMO).

After having marked out the area, we divided it in two portions, respectively West and East of a strip 2 m wide, oriented N-S, that was kept unexcavated and used as a service track for
wheel-barrows. The two portions were then internally divided into 8 sectors each, orthogonal to the service path, and numbered from N to S, from 1 to 8. It was then considered convenient to combine each adjacent pair of sectors into larger sectors, that were consequently labeled, from the North, as BKG 11 W and BKG 11 E, 1-2, 3-4, 5-6 and 7-8. The sectors are separated by baulks left unexcavated and used as service corridors for the passage of the wheel-barrows used for waste soil movement.
The total excavated area covers > 6000 sqm; it has the shape of a trapeze with its major base on the North. The West side is c. 140.00 l, the E side, 105.00 l, while its width ranges from 70.00 (N) to 60.00 (S). The Sectors are approximately 30.00 w and 25.00 l. The surface clearly slopes towards North, and is marked on the West side by an artificial

step created by the subterranean presence of the ancient city wall.
The excavation/conservation work lasted for 258 working days (43 weeks), distributed in 5 Seasons:

Season 1: April-June 2011
Season 2: October-November 2011
Season 3: April-June 2012
Season 4: October-December 2012
Season 5: April-May 2013.

To the excavations partecipated, besides Italian archaeologists, DOAM KP officers as Departmental Representatives: Mr Amanullah Afridi (2011-2012), Mr Syed M. Niaz Ali Shah (2011-2013) and Nawaz-ud-Din (2013) (they are also co-Authors of the Excavation Report).
Students of the Taxila Institute of Asian Civilizations, Quaid-i Azam University were also actively present at the excavations; some of them have also contributed to the Excavation Report (Olivieri, ed., in press):

Arsalan Butt
Ashraf Khan
Haroon Khan
Idris Khan
Ifqut Shaheen
Ikram Qayyum
Muhammad Amin
Muhammad Ibrahim
Muhammad Rizwan Mughal
M. Shoaib Alam Khan
Muhammad Shoaib Riaz
Qamar-un Nisa
Rafiullah (PhD program)
Rimsha Asghar
Sadeed Arif
Saiba Lai-Venti
Saiqa Akhtar
Samina Batool
Sajad Ahmad
Tayyba Jadoon
Tehmina Shaheen
Uzma Sumro
Amber Batool
Masseh-ullah (PhD program)

Objectives, strategy and social impact
The main four reasons why the area BKG 11 was selected for new excavations are the following:
1) to save the only available portion of the ancient city from the advance of the built-up area;
2) to expose the largest possible area in order to understand and

therefore display the Late-Kushan urban lay-out within its structural limits as represented by the city Defensive Wall ;
3) to determine the chronology of the final abandonment of the city (Period VIII) as well as of the latest occupation phases, and situate it in its regional historical context.[3]
4) to re-affirm the historical importance of the archaeological site and to lay out the largest possible area in the form of a permanent public archaeological park, accessible to tourists and visitors.

Strategy
In order to achieve all 4 objectives, it was decided first to begin cleaning the area, including the removal of the waste soil from the trench BKG 4/5, and afterwards to begin the restoration of the visible part of the Defensive Wall (Season 1: Spring 2011), then to continue with the excavation of the entire area, starting with the W Sectors (Seasons 2-3: Fall 2011, Spring 2012), and then with the E Sectors (Seasons Fall 2012, Spring 2013).

The experience and data gained from the trenches BKG 3, and 4/5 (i.e. those dug in the vicinity of the South and West stretches of the Defensive Wall, allowed us to proceed with a horizontal excavation of the latest occupation phases (i.e. Periods X and IX), which followed the abandonment of the urban hub.

After several years of vertical digs (see bibliography at the end of this report), which afforded us reasonable insight into the structural sequence of the area, and after several years spent investigating the surface evidence inside and outside the ancient city area (Olivieri 2003_a, Olivieri, Vidale et al. 2006), we felt confident enough to start a large-scale horizontal operation, with the aim of exposing the same structural period encompassing the entire area. We followed the same strategy model successfully employed by the recent British excavations at Merv (Simpson 2008). Thanks to that strategy, the British colleagues were able to better understand the phases of abandonment and re-use of the Late Sasanian city. *Mutatis mutandisi*, these were exactly the main objectives we pursued here at Barikot with reference to a Late Kushan horizon.

[3] The analysis of the cultural horizon of those two Periods has been addressed in detail by P. Callieri in his paper on the BKG post-Kushan phases (Callieri 2010).

Having achieved this objective as far as the post-abandonment occupation phase (Period IX) in the W Sectors is concerned, during Fall 2012 we started an analogous operation in the E Sectors. At the same time we began exposing the stratigraphy pertaining to the last phase of the city's life (i.e. Period VIII) in W Sectors). Here the work started from the street network, consisting of a street running along the inner side of the West stretch of the Defensive Wall and of an orthogonal street running in an E direction. From these two streets, having cleared the entrance of two residential units, we began excavating their hallways along with portions of their inner courtyards. The rest of the area was left at its Period IX level.

While the excavation was proceeding, the restoration was begun on the existing portion of the W stretch of the Defensive Wall (the external part of which was bulldozed in many parts). Since the wall was no longer visible in Period IX, it was decided not to restore those small portions where the Period IX drainage system ran across the previous defensive structure. The final result was intended to give visitors a practical understanding of the whole city, at least in its SW quarter, as it appeared in Late-Kushan times, and at the same time to illustrate how the city looked after its abandonment, when its ruins were briefly or seasonally occupied by groups of non-urban occupants, which activities and remains have been illustrated in this article by MC.

Several samples were taken and analyzed for 14C purposes in order to provide a sound chronology for these late phases of the city's life (on some of these, see above).

The new excavations provided more information on these last phases of the ancient city. In actual fact our plan is to stop at these upper levels (Period IX in the whole area, and Period VIII in selected sectors). As a collateral result, we hope also to give the visitors a general, unique view of a large, densely populated urban site, but at the same time avoiding large-scale maintenance and major conservation problems.

The activities included the clearance of the W stretch of the Defensive Wall, as well as the excavation of a small extension at the SE limit of the trench BKG 4-5. During the excavation, we were able to uncover a bastion (SE), the existence of which had already been known since 1992. Furthermore, we were able to uncover and restore the

visible parts of the fortification circuit and bastions along the West stretch. The monumental structure was restored by means of a reversible intervention consisting of dry masonry and layers of mud. The final result, without modifying the uniqueness of the ruins, thus provides the visitors with a general picture of the original grandeur of the Indo-Greek fortifications.

We also placed information panels illustrating the various phases of the city's life along the visitors' path and along the central path and inside the excavated portions.

The training program

The archaeological fieldwork at Barikot was part of the activity of the "Archaeology Community Tourism – Field School Project" (ACT-Field School) funded by the Pakistan Italian Debt Swap Agreement (PIDSA), through the Technical Support Unit co-directed by the Economic Affairs Division, Government of Pakistan, and the Ministry of Foreign Affairs, Goverment of Italy. The project is implemented by the Italian Archaeological Mission in Pakistan (IsIAO, now ISMEO), and by the Directorate of Archaeology and Museums of the Khyber-Pakhtunkhwa Province. Being a project involving training in the field of archaeology, ACT is put under the vigilance of the Department of Archaeology and Museums, Ministry of National Heritage and Integration, Government of Pakistan.

Within this framework, the excavation was meant to function also as a training program for local workers (and for University students). The training, or better the "cash-for-training" program, was organized on a 6 days per week-6 hours per day schedule. The daily wage of the trainees was a little bit higher, but still the equivalent of the local standard wage for a 8-hour daily farm worker. To the standard wage we added a bonus of 1 paid day per week worked for all trainees at the end of each Season.

So far 127 individuals have been involved in the program, 31 of whom left their course during the training program (most of these migrated to Karachi and the Gulf Countries during Season 1); 2 individuals were trained as "Chief Trainees", 1 as "Chief Restorer", 3 as "Restorers", 2 as "Site foremen", 10 as "Sector foremen", 18 as "Unit foremen", and 2 as "pottery washers". A Chief trainee is a trainee

who is able to manage quite independently the complexity of a stratigraphical excavation, including the management of the related working units. A chief restorer, the same as above for restoration *Fig.*

32 - BKG 11, Season 5, Spring 2013: excavation in progress at Court 107. (Photo by LMO).

operations, including treatment of stucco and plaster. A Restorer is a trainee with particular skills in masonry restoration. A Site foreman is a trainee who is able to manage in partial autonomy the complexity of various sectors of the archaeological work (such as disposal/reutilization of waste materials, organization of lines of activity, etc.). A Sector foreman is a trainee who is able to manage in autonomy the excavation of a working sector. A Unit foreman is a trainee who is able to manage a working unit (such as soil disposal, or the cleaning of masonry structures, etc.) in autonomy.

In conclusion we may define the BKG 11 excavation program as one of the first in South Asia, where local workers are not acting merely as physical manpower, but are involved directly in the stratigraphical excavation, documentation and work planning, side by side with University students, archaeological officers and foreign experts. The

training program involved stratigraphic excavation, site management, site logistics, first-aid restoration (for masonry structures) and basic documentation. Besides these aspects, the Site foremen were involved also in basic English training and in an Occupational Safety Health and Environment (OSHE) program run by ISCOS-INGO experts.

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-4-
The Environmental Friendly Historic Urban Planning in Potohar Plateau, Pakistan: Lessons for modern architectural plans

Alia Jawad and Sadeed Arif

Abstract

The paper presents the nature and scope environmental friendly urban/town planning and residential buildings of late 19th and early 20th century in Potohar Plateau. The study of urban/town planning included a description of residential quarters of cities and towns, the rules for making streets, lighting them at night; the relationship of plants with residential quarters, water procurement, sewerage and drainage systems of past. The study of residential buildings included a description of the principles of layout of houses, i.e., their orientation, relationship of courtyards with virandahs and rooms; and their architectural features, i.e., the facades decorations, types of main doors, windows and ventilators, as well as pillars and pilasters. The paper highlights that the traditional urban planning, architectural features and materials corresponded successfully to local environment, while modern architecture largely fails to do so. The paper concludes that we may take lessons from architecture of past; try to apply them in modern constructions, and also to properly preserve the historic buildings for sake of education of the common people.

Introduction

The characteristic features of late 19th-early 20th century urban/town planning and residential buildings of Potohar Plateau were recorded during a survey project titled 'The Survey and Documentation of Archaeological Sites and Historic Monuments in Potohar Plateau' conducted by author, in collaboration with Former Ministry of Culture, Islamabad. The project focused on four districts[1] of Potohar

[1] District in Pakistan is the basic unit of administration and the focal point of all social, cultural, economic and administrative activities.Districts are the second

Plateau, *viz.* Attock, Rawalpindi, Chakwal and Jhelum. The present paper presents an essence of urban/town planning in ten cities, villages and towns; ten residential buildings; three *bazaars* (market places) and twenty water ponds. Special mentions are given to some cities and town, for instance, Rawalpindi, Islamabad, Kuri Shehr, Rawat, Fateh Jang, Qutbal, Chakwal and Daultala; and villages, i.e., Dhok Adrana, Ghaznabad, Barki Badhal, Pharwal and Nila (see table 1 & Map 1 for details). The study is significant as it focuses on architectural features and materials of ordinary houses as opposed to a general trend of highlighting large and affluent historic monuments and relates them with local climate. The results of the survey also highlighted that some thriving business towns in late 19th and early 20th century CE were presently shrunk to unpopular small towns and villages due to change in course of popular roads. However, this solitude was helpful in preserving historic monuments, that otherwise disappeared rapidly after introduction of new architectural styles and materials since 1970s.

The historic architecture, urban and town planning constitutes an important part of cultural heritage of any nation. Physical heritage includes buildings and historic places, or artifacts worthy of preservation for future reference. The concept of cultural heritage was traditionally limited to famous monuments and sites. However, presently it includes all types of buildings that are inherited from past. They are not only unique for their architectural styles but also bear imprints of the past communities. They are unique and irreplaceable, and their disappearance may cause impoverishment of the heritage of a nation or society.

The Potohar Plateau lies between River Indus on its west and River Jehlum on its east. Margalla hills and Kala Chitta Ranges from its northern boundary. Kala Chitta Range rises to an average height of 450-900 meters and extends about 72 km. Salt Range forms the southern boundary. Suleiman Ranges start from Murree hills and end near Kalabagh in River Indus **(**Encyclopedia Britannica 2007**).**

Potohar Plateau has a rich history and culture. However, there has been little research on its historic architecture or urban

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ordered administrative divisions of Pakistan; first being the 'Provinces'.

planning. The urban planning provides clues to socio-psychological culture of its inhabitants. A large number of historic cities and towns in the plateau still preserve their original urban planning and architectural styles due to their location in remote areas. The historic cities and towns of Potohar Plateau represent a mature phase of architectural development, a deep understanding of architectural geometry, orientation of houses, the planning of spaces and volume and treatment of the facades. The architectural decoration was carried out to provide a visual impact. Furthermore, the historic architecture responded successfully to local environment by using locally appropriate constructional materials. A number of sophisticated ventilation systems were designed and the insulation properties of many natural materials were used (Rehman 1977).

Qila (fortress) was an important architectural element of a historic city. It provided privacy and security to the inmates. *Qila* referred to a small number of *mohallas* (a small residential quarter consisted of a few houses), having one entrance. The houses of the external limits were knit together in such a way that their external walls fortified the *Qila*. When its one doorway was closed, the whole *Qila* was fortified. The streets of the Qila were made narrow and winding for security purposes. The interior streets of Old Qila in Rawalpindi city were extremely narrow (3 m wide). They seemed to be meeting at their top. The quarter belonged to the Bhabaras who were the wealthy Jain community. They built their residences in narrow lanes for protection against intruders.

Ahata (urdu word meaning an enclosure) was another important feature of urban planning. It was a walled living area, accessed through one gateway, which remained open during day and closed at night. An *ahata* was smaller than a *Qila* or a *mohallah*. A few houses (10-15) were built around a common courtyard. It provided security and intimacy to inmates of *ahata*. In Lal Kurti Bazar, Rawalpindi, the facades of front houses shared one long and continuous gallery, separated through thin concrete or wooden sheets (Pl. 1a).

Houses were the basic unit of construction. The orientation of the houses corresponded to local climate and sun path. Sunlight has influenced the building design since beginning of architectural

history. Orientation was generally made to exclude the sun and maximize exposure to the cooling breeze in hot summer season. The houses were generally aligned facing north to receive direct sun light in winter when the sun was in the northern sky and allowing passive indoor heating through windows. However, it stopped the direct sun light in summer, when the sun was direct over head. The heavy eaves and shade windows further stopped the direct summer heat. Particular attention was given to day lighting for visual comfort. The windows and ventilators were placed in such a way that it permitted natural light for internal illumination (Pl. 1b).

The central courtyard, *virandahs* on one, two or more sides, and the rooms opening in the *virandahs* was a preferred plan of a historic house in Potohar Plateau for its practical usage. It not only provided privacy to inmates, but also a sharp contrast of massing between solids and voids, creating excellent conditions for continuous air movement in the house. The basic plan of the courtyard was rectangular or square. The courtyards and *virandahs* acted as the modifier of hot and dry climate. The courtyards presented contrast to narrow streets that remained in shade for most part of the day. The courtyards provided ventilation and light to each individual room. It served as light well during day and air well during night. The high walls of the courtyard saved it from early morning and noon sun. The sun reached the courtyard later in the day, when heated air rose and the convection currents caused an air flow that ventilated the interior court, as well as house. The arched entrances to the *virandahs* probably further enhanced smooth flow of air inside the living rooms.

A variety of pillars and pilasters were experimented in Potohar Plateau in late 19th-early 20th century CE. In Soojan Singh *Haveli* the triplicate pillars of the main *virandah* culminated into horse shoe arches. In Barki Badhal House 1[2] the tri-lobed arches of the *virandahs* were sunk in rectangular frames, supported by square pillars (Pl. 2a & b).

The walls of the houses were thick enough to absorb heat without transmitting it to interior. The traditional building materials

[2] Two historic houses were noted down in Barki Badhal, designated as Barki Badhal House 1 & Barki Badhal House 2 in present study.

such as earth, stone, brick and wood possessed a porous property, absorbing not only excessive heat, but also cold wind, thus making the house comfortable in hot as well as cold weather. They also possessed the capillary effect, absorbing water which could evaporate from their surface and thus hindered the interior air from being re-warmed by convection. The insulation properties of the earth were used by mud plaster in stone walls, or excavating underground basements in the houses. The basements were used for living, storing and also for defensive purposes (Michell 1995: 199). The main entrance of the house was followed by an entrance foyer or '*deori*'. It gave access to courtyard and also upper storey. On upper storey a balcony ran all around the courtyard to provide access to different rooms. The interior and exterior balconies were to create more space for upper storey rooms. Moreover interior balconies shaded the courtyards, while exterior balconies shaded the street and protected the passersby from sun and rain. The deep narrow streets were cooled. Facades were comparatively unexposed to sun rays, and cool air was collected at night. The multi-storeyed buildings shared parting walls, thus reducing the surface areas exposed to sun or air.

In Barki Badhal House 2 the windows and doorways were surmounted by large and wide ventilators, provided with decorative eaves. Sometimes whole length of the wall was pierced by windows and ventilators[3], separated by a narrow piece of wall (Pl. 3a).

Lal Kurti (meaning the red shirt) Bazaar is located in the southern quarter of Rawalpindi Cantonment. It contained a number of houses of Late 19th and early 20th century CE, reflecting a middle class business society. The lower storey comprised shops or store houses, while upper storey had residential quarters. The houses in the main bazaar streets did not have a courtyard. Rather, the projected wooden balconies were used as women quarters. The balconies were covered with wooden screens in front pierced by one, two or three windows. The daily house chores could easily be carried out in balconies, keeping privacy, as well as maintaining sun and

[3] Ventilators were the small windows pierced above the regular windows, closer to roof. They were meant for ventilation and light.

ventilation for inmates. The entrances to houses were provided in rear streets. These houses revealed a closely knit business and family life. The male members could set their business close to their houses, keeping in touch with their families even during business hours. Similar examples were also noted down in the main street buildings of *Raja Bazaar*, Rawalpindi (Pl. 3b & 4a). The houses in back streets of the same *bazaar* represented small *bangalows*[4] with spacious courtyards and airy rooms.

Daultala was a historic town, with high concentration of well preserved historic buildings. A total number of eight houses of historic character were recorded, among which four were noteworthy. About six wooden balconies were present, among which four were in fair state of preservation. The houses of the wealthy possessed heavily decorated facades in front of houses of modest dimensions. The facades exhibited a wide variety of wooden doors, wooden balconies, wooden *jharoka* (eaves) and pilasters. A variety of pilasters were experimented, ranging from Ionic[5], Corinthian[6] to purely local character. The winding narrow streets were sometimes covered by projecting balconies on either sides of the street. The main doors were made monumental by raising them to a height of three stories. The whole being enclosed in single, double or triple brick frames (Pl. 4b). The doorway of one house was surmounted by a tracery window, flanked by slender brick pilaster, above it was a polygon bay window[7] of Victorian style[8] (Pl. 5a); finally surmounted by rectangular name plate bounded by two small turrets. The wooden

[4] A bungalow refers to small detached house, meant for a single family unit, as opposed to apartment houses. Generally it had wide verandah across its structure.

[5] The ionic pillars were remnants of ancient Greek order, comprising volute capitals.

[6] Corinthian pillars, representative of ancient Greek and Roman architecture, were introduced in 1st century CE in Gandhara art. The abacus upon the capital had concave sides to conform to the out-scrolling corners of the capital, which may have a rosette at the center of each side.

[7] A bay window is a window space projecting outwards from the main walls of a building, either square or polygonal in plan.

[8] The term Victoria style refers to a number of architectural styles employed during middle and late 19th century in united Kingdom.

door jambs of another house were sunk in multi-lobed rectangular frame. The doorway was surmounted by triple windows, sitting on a slightly projected frame. Another doorway was flanked by globular seats on its both sides. The brick or stone seats flanking main doors were regular feature of the houses of Potohar Plateau. They served as temporary resting place for older people or children playing in the streets (Pl. 5b).

There was an elaborate system of street lighting at night. Kerosene lamps[9] were placed in lighting niches at corner of every street. The streets of the entire city were illuminated in this way. The external corners of the houses were chamfered for easy flow of human and mechanical traffic (Pl. 6a).

Qutbal was a medium sized town of Tehsil Fateh Jang in Attock. The old quarter of town, locally called as *bazaar*, built in late 19th century CE, represented better urban planning than modern parts of the same town (Pl. 6b). The deep drains represented an effective sewerage system. The houses were built of dressed stones. The front faces of the stones were additionally chiseled with deep cuts to present an even finer look. The facades of the houses presented artistic, wealthy and pleasant look. They were elaborately decorated with door portals, windows and ventilators. The wooden doors (1.5 x 1.20 m) were sunk into rectangular portals flanked by Corinthian pilasters on both sides (Pl. 7a). The doors were surmounted by a molding and ended in a multi-cusped arch, typical of 19th/20th century architecture in Potohar Plateau. The main entrance was flanked by three windows (1 x 2 m) on each side. The windows were surmounted by pointed arched eaves, and further above were the rectangular ventilators, sunk in shallow curved eaves (Pl. 7b).

The earth and wood was the favored architectural material in Potohar Plateau. Wood is a fibrous material with a porous network structure. The strength of wood both from tension and compression arises from its organic nature, which gives it an internal structure of longitudinal and radial fibers that is not impaired by cutting or long

[9] Kerosene oil is a combustible hydrocarbon liquid. Kerosene lamps were widely used for lighting at night before modern electrical supply to each and every house in cities, towns and villages of Potohar Plateau in 1970s.

exposure (The New Encyclopedia Britannica 1995: 881). Moreover, it could be profusely painted and lacquered. Wood was used for screens, balconies, doors, ceilings and for the cupboards. The wood carving revealed a perfect craftsmanship. Moreover, small pieces of wood were fitted together in complicated designs. Ceilings were also made of carved wood, often painted. Sometimes pieces of mirror were used in mosaic inlays. The thick and bulky stone and wooden architecture yielded best insulation and acoustic properties. The stone architecture absorbs harmful short wave sun radiations and radiates long wave radiations, useful for human health. The solid wooden structures were acoustic materials that absorbed incident sound and reduced sound pressure in the buildings/rooms (Bucur 2006: 2). It provided a quieter and serene environment to the living rooms of the houses.

The wooden works of extra-ordinary workmanship of late 19th-early 20th century CE, were recorded in old city buildings, as well as in far off towns of Potohar Plateau. The wooden balconies in historic cities and towns were built with technical proficiency and structural durability. The wooden frames were made and duly nailed down for strength and durability. The parapets, in the form of eaves, were supported by a row of brackets. The doors were adorned with geometric and floral patterns, showing the proficiency and absolute precision that was transferred for centuries. The paints of good quality, e.g., yellow, vermillion, azure, blue and green were used for painting wood. The wooden ceilings were worked in geometrical and floral patterns. A few other examples could be cited as the main door of Soojan Singh Haveli (mansion) in Rawalpindi city, two doors in a small town called as Pharwal, two doors and two painted ceilings in Nila Village, one door in Kuri Sher, Islamabad, and two doors and one ceiling in *Dhok Adrana*.

The jambs of the main door of Soojan Singh[10] *Haveli* were sunk in rectangular panels with exceptionally delicate floral and animal motifs. They were divided into six smaller rectangular panels,

[10] Locally called as Soojan Singh *Haveli*, *Haveli* is Urdu word meaning 'Mansion'. Rai Bahadur Sardar Soojan Singh was related to Maharaja Ranjit Singh. Ranjit Singh ruled Punjab in early decades of 19th century CE.

three in each door jamb, bounded by floral carving. The central panel was carved with a male and a female in traditional dresses. The four panels above and below these central ones were carved with bird motifs sitting along potted bunches of flowers (Pl. 8a & b). The door jamb was surmounted by carved, curvilinear canopy, flanked by two kiosks on either side. The second storey of the mansion had double flooring, the concrete one covered by wooden paneling. The wooden paneling must have had absorbed the excessive heat and noise of the second storey. The wooden ceiling, although crumbling and disappearing, still represented an exquisite carving and painting in delightful brown and golden colors.

A desolate house in the far off village of Pharwal exhibited two extensively carved doors, one painted cupboard, some pillars, lintels supporting the roof, and carved supports for these lintels. A Pharwal wooden door of outstanding dimensions **(**wooden frame: 8 x 12 ft; door jambs; 4 x 6 ft) with its detailed floral and geometric carving, was reported to be executed in late 19th century CE. The door jambs were sunk in a wide wooden frame, with three panels. A carved wooden screen surmounted the door jambs. The screen was meant to provide light and air to the interior of the room. However, sadly speaking, the house was uninhabited for eight years. One door was standing in the door way, while other was lying in open courtyard, exposing it to harsh cold and hot weathers. Inner wooden structures were in a fair state of preservation due to the excellent quality of wood, and its paint. However, the wooden structures were likely to be rotten due to non-interest of the owners of the house.

The carpenter's family in Nila village reported that the craftsmanship existed in their family for several centuries. Their house still possessed two wooden doors, exquisitely carved and worked out by their late grandfather (Pl. 9a & b). However, the demand for wooden architecture diminished after 1960s. Consequently, some heirs of the traditional carpenters entered into formal education system and totally left traditionally transmitted craftsmanship; while others moved to unskilled labor market. Two other doors in the same village were reported to be 150-200 years old. One singularly painted wooden ceiling was marked by the name of the painter and date of its execution, i.e., 'Noor Mohammad, April

1917'. The painted ceiling exhibited the stars filled with floral patterns in different colors and geometric designs within continuous circles. The wooden frame not only covered the ceiling, but also upper part of the inner walls of the room. The upper borders of the frame were painted with floral stripes, backgrounds being filled by blue and off white paint. The painted wooden structures still revealed an amazingly fresh look. No termite was reported in the wooden structures (Pl. 10a & b).

Plants were important part of historic urban planning (Pl. 11a). Almost every house contained plants. When houses were located in dense interior parts of the city, where sun could not reach; or their courtyards were too small to contain plants, the parapets of the roofs contained special platforms for flower pots. Sometimes external corner pilasters culminated in a flat platform for the same purpose. The Barki Badhal House 1 exhibited a polygonal pilaster ending in a huge polygonal capital, creating a spacious platform, possibly meant for decorative flower pots. The projecting platform was supported on large and curved petal shaped brackets (Pl. 11b).

The trees were also planted around the houses to provide shade and serenity, and also to purify the outer environment. Plants are indispensible component for cleaning air, preserving ground water, preventing soil erosion, and maintaining healthy eco-system (Apffel-Marglin & Pramod 2000:300; Charnyuler 2007:22). Clean air forms a blanket of friendly gases around the Earth, saving it from hostile cosmic radiations. The historic buildings played a fundamental role in preserving and sustaining clean bio-diverse environment, which needs to be yet explored by ecologists.

Large water ponds/tanks were integral part of historic towns and cities in Potohar Plateau, since immemorial times. They enjoyed not only a utilitarian but also a religious significance in the area. They were equally revered by Buddhist, Hindu, Sikh and Muslim communities, and were repeatedly mentioned in religious lore. They were considered holy till 1960s. Some local festivals are still held on banks of these ponds. Shaded and fruit trees of different kinds were planted around the water tanks. Huan Tsang, the Chinese Buddhist pilgrim to Gandhara and other parts of India in 7th century CE, mentioned gigantic water tanks in Hasan Abdal, District Rawalpindi.

He mentioned lotus flowers in water tanks and 'fruit trees of hundred kinds' all around the tanks. Same tanks were noted down by Jahangir in his *Tuzk-i-Jahangiri* (*cf*. Jawad & Sadeed 2009: 146, Rashid 2005: 63, Pl. 12a). Although extensive washing activities were carried out along the banks of these water ponds, no one directly washed or bathed in water ponds. Muslims took water for ablution from these ponds. No one directly bathed in water ponds. Rather bathrooms were constructed along their banks. The surveyors noted down foundations of several bath rooms at Kot Fateh Khan and Sagari town. At Ghaznabad, a row of four modern shops was standing over sturdy foundations of old bathrooms (Pl. 12b).

The cool banks of the ponds also served as community center where women did their washing during day and men folk sat and chatted during evening. They also provided ideal play and gaming center for children and youth. Sometimes ponds were walled to keep women away from gaze of the passersby. They were cool picturesque landscape in otherwise semi-arid, hot surroundings. The construction of water ponds was largely a community work. People of all walks and different religious communities voluntarily took part in construction of these water ponds. Their architecture was planned, elaborate and sometimes even monumental. They were constructed closer to water streams. An elaborate system of paved and covered water channels brought clean water from water streams to the ponds. They replenished community water supply and also maintained ground water table. Furthermore, they absorbed the solar energy and provided hot water in cold winters. They gave a sense of repose and coolness. The evaporation of water and presence of plants helped to keep air cool (water ponds). The water ponds once held a respectable position in town planning. They were the integral part of daily life activities. They provided easy, affordable access to clean and pure water. Although wells were commonly used in Pre-Partition Potohar, the water tanks supplemented the water supply. The sun rays not only warmed the water but also cleaned it, making the lives of the common folk easier. In far off towns of Potohar, where water fetching is extremely difficult due to uneven terrain, the wells had once provided easy access to healthy water supply. However, the Government water supply in 1970s caused misuse of wells as well as

the water ponds.

A few towns, hamlets or residential quarters of the old cities were named after water ponds, for instance *Banni Saran* (meaning a motel situated along the water pond) in Rawat town[11], or *Banni mohalla* (meaning water pond) in Rawalpindi city.

Conclusions

The above discussion highlighted that traditional urban/town planning and architectural styles were environmental friendly in nature. The natural thermal and acoustic properties of a number of architectural materials were successfully exploited during Late 19th and early 20th century CE in Potohar Plateau. The porous properties of several natural materials, i.e., stone, brick, earth and wood were used for a balanced thermal effect in extremely hot and cold weathers. The thick walls absorbed heat; a variety of ventilators and high ceilings provided better cooling effect than modern houses. The modern research reveals that stone absorbs the harmful sun radiations. Traditionally lime plaster was used to white wash houses. The lime plaster absorbs excessive carbon dioxide, thus cleaning environment from impurities. The thick wooden planks absorb the incident sound and reduce sound pressure in the buildings (*cf.* Bucur 2006: 2). Furthermore, the historic monuments revealed high aesthetic value on account of best wooden carving and painting, and decorated facades of the houses. On other hand, the modern buildings made up of cement and concrete, mainly built for the high rate of return, sometimes cause immense environmental pollution. The cement industry is the second largest carbon dioxide emitting industry after the power generating industry. Its high temperature calcinations processes also release toxic heavy metals in atmosphere, e.g., thallium, cadmium and mercury. The modern paints contain toxic materials that are harmful for human health.

The results of the present survey revealed that a number of historic buildings were standing in a derelict state of preservation (Pl. 13a & b). They were standing in a utter state of neglect and non-

[11] The historic town of Rawat is situated about 18 km east of Rawalpindi on main Grand trunk road from Rawalpindi to Lahore or vice versa.

appreciation. Some of them were locked and people hesitated to walk closer to them as they could fall any time. The large mansions, once most affluent and notable in cities, could crumble to dust soon. The thick roots and shoots of old *Pipal* trees were growing in old and dried drains in external walls of the monuments. At instances, their precious scrupulously carved and painted doors were stolen, leaving only door frames behind. Some buildings were razed to ground to give way to modern business and residential plazas. Some were still used for residential or commercial purposes, but no attempt was made to preserve the notably beautiful architectural elements of the buildings. The wide cracks were apparent in the external walls. The buildings were liable to fall down any time. They needed urgent preservation and restoration.

The study also highlighted that traditional craftsmanship disappeared or veiled due to modern mechanical and electrical technologies. The heirs of the craftsmen largely turned to unskilled labor[12] on daily wages.

The historic urban/town planning suffered badly on account of modern architectural trends. The proper orientation of the houses is largely forgotten, resulting in dark and climatically incompatible residential constructions. The water procurement and sewerage system deteriorated in face of ever increasing population and unplanned extension of the cities and towns. The water ponds were filled to procure land for houses; their stone or brick was taken away for modern constructions, or leveling the agricultural fields in rural areas. Those that escaped the human agencies were in bad state of preservation due to natural ravages. A number of water ponds were filled with filthy water and became a source of disease and environmental pollution. However, a few water ponds were preserved and maintained by the local government, making these vast resources still useful for washing purposes and quenching the cattle.

At a time when incompatibility of modern architecture has widely been recognized, we need to take lessons from rich cultural repository of traditional architectural styles and materials. The

[12]Unskilled labour is one of the lowest paid jobs in Pakistan.

traditional buildings, although standing in a state of neglect, they still provide significant clues to designing contemporary environmental friendly architecture.

Recommendations

On basis of above discussion, I recommend that:

- Some of the important traditional buildings in Potohar Plateau, belonging to late 19th-early 20th century CE, may be included in National heritage inventory of Pakistan.
- These may be conserved/renovated and preserved for the education of future generations.
- The local traditional monuments may be included in the courses of syllabi for primary and secondary school social sciences.
- Lessons may be taken for modern constructions by adding chapters on traditional architectural styles and materials in the courses of syllabi of architectural planning and residential engineering.
- The common masses may be taught significance of traditional architectural styles through reports and documentaries on mass media.

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Annexure 1
Table 1:

Sr. No	Name	Location
1	Rawalpindi	District Rawalpindi lies between 32°6′ and 34°1′ north latitude and 72°47′ and 73°42′ east latitude. Rawalpindi city (33.6000° N and 73.0500° east is a twin city of Islamabad. It is the fourth largest city of Pakistan after Karachi, Lahore and Faisalabad.
2	Islamabad	Capital of Pakistan, 33.43° North, 73.04° East at north edge of Potohar Plateau and at the foot of Margalla Hills.
3	Kuri Shehr	Kuri Shehr is a historical city, located in Islamabad, coordinates; 33°41′0″ North, 73.11′0″ East (33.681N, 73.178E).
4	Rawat	Coordinates; 33°30′00″ North and 73°12′00″ East; lies about 18 km east of Rawalpindi city on main grand trunk road running from Rawalpindi to Lahore or vice versa.
5	Fateh Jang	Fateh Jang located in District Attock, coordinates; 33.5689° North and 72.6378° East; lies 25 miles west of Islamabad on Rawalpindi-Kohat or Rawalpindi-Mianwali road.
6	Qutbal	Qutbal is a historic town in district Attock.
7	Dhok Adrana	A picturesque village of about 200 houses, lying at the bank of River

		Swan, about 40 km west of Rawalpindi, and 30 km from Rawat.
8	Ghaznabad	In Tehsil Kallar
9	Barki Badhal	Burki Badhal is a small town, situated about 1 km west of Gujar Khan city. Gujar Khan city is located in District Rawalpindi, coordinates; 3316′0.120″ North, 7319′0.120″ East. Barki Badhal town is located about 25 km on Sandal road, west of Barki interchange on Grand Trunk road, running from Rawalpindi to Lahore.
10	Pharwal	A small village of about 100 houses. The village belongs to Police station Chauntra, and lies about 6 km from the police station.
11	Chakwal	The historic city of Chakwal is located 90 km south east of the Federal Capital of Islamabad, with geographical coordinates; 32°56′0″ North and 72°52′0″ East.
12	Daultala	The historic town of Daultala is located in District Rawalpindi, situated about 60 km from Rawalpindi, with coordinates 33°12′0″ North and 73°9′0″ East.
13	Nila	The small village of Nila is situated about 50 km southwest of Chakwal city, with coordinates 33°10′3″ North 72°36′53″. It is one of the oldest and most beautiful village of district Chakwal.

Map 1: showing major surveyed sites

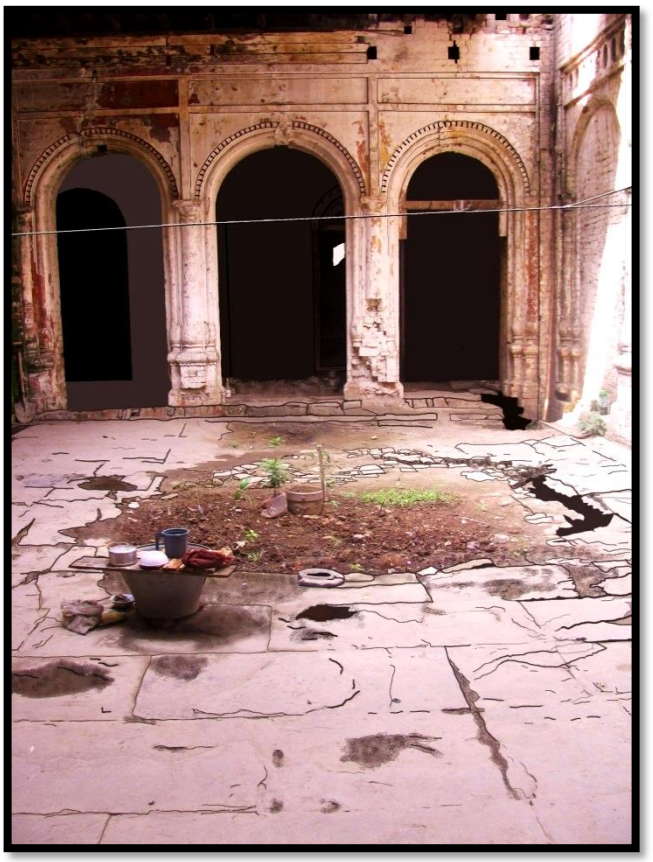

Islamabad
Kuri Shehr
Qutbal
Fateh Jang
Rawat
Ghaznabad
District Attock
District Rawalpindi
Dhok Adrana
Pharwal
Barki Badhal
Daultala
Neela
Chakwal
District Jhelum
District Chakwal
US Dept of State Geographer

Pl. 1

1a. Ahata in Lal Kurti

1b. Windows and ventilators of upper storey, Bhabra *Bazaar*, Rawalpindi

Pl. 2



2a. Picture showing courtyard and arched *virandahs* of Soojan Singh Haveli

2b. Arched *Virandahs*, Barki Badhal House 2, Gujar Khan

Pl. 3

3a. Doors and ventilators, Barki Badhal House 1, Gujar Khan

3b. Lal Kurti Balconies

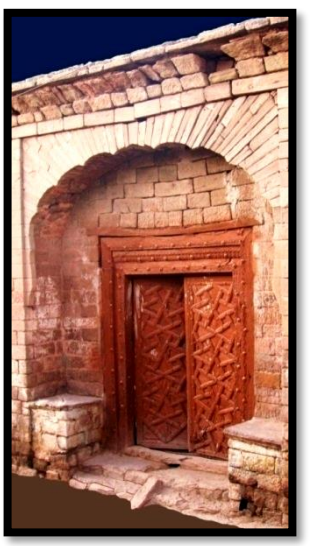
Pl. 4

4a. Wooden Balcony: Raja *Bazaar,* Rawalpindi

4b. Daultala Doorway

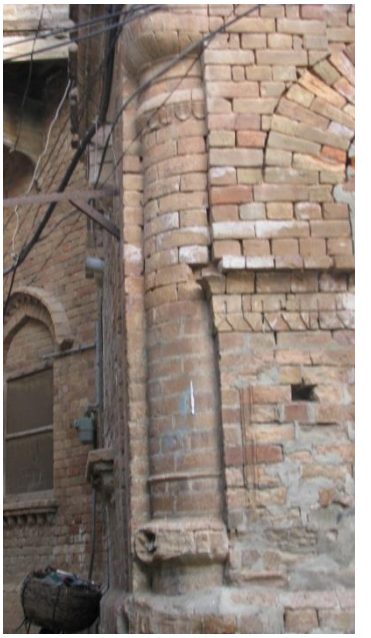
Pl. 5

5a. Upper storey windows in Daultala town

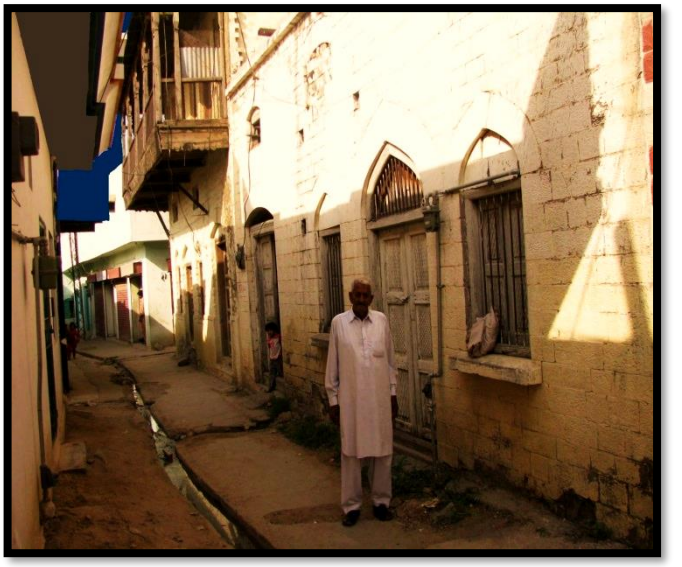


5b. Seats besides doorways, Daultala

Pl. 6



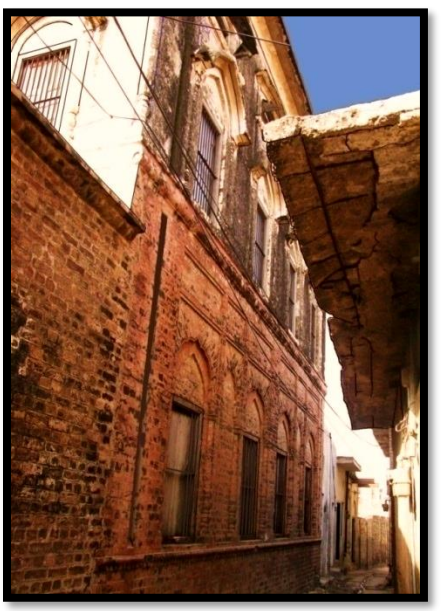
6a. Abutted corners through rounded pilasters in Daultala town



6b. Narrow Street of Qutbal town

Pl. 7

7a. Corinthian Capital in Qutbal



` **7b. Qutbal Windows**

Pl. 8

8a. Wooden Relief of Main Door of Soojan Singh *Haveli*

8b. Wood Relief Work: Main Door of Soojan Singh *Haveli*

Pl. 9

9a. Nila Village Door 1

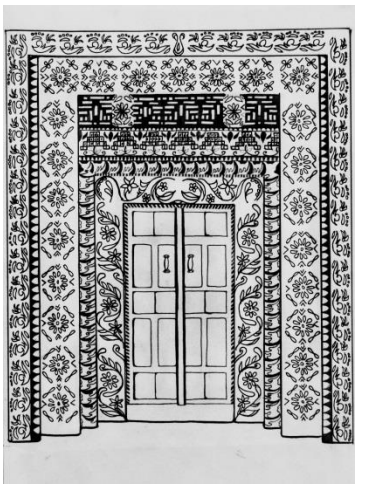
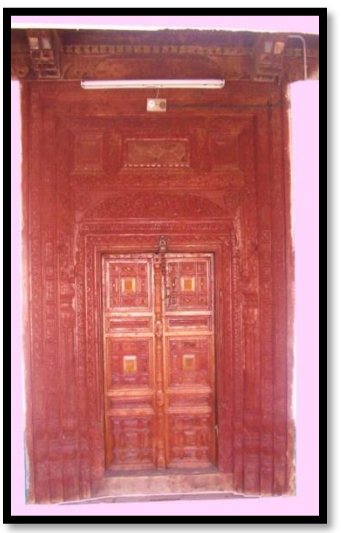


Fig. Pencil Sketch. Nila Village Door 1



9b. Nila Village Door 2

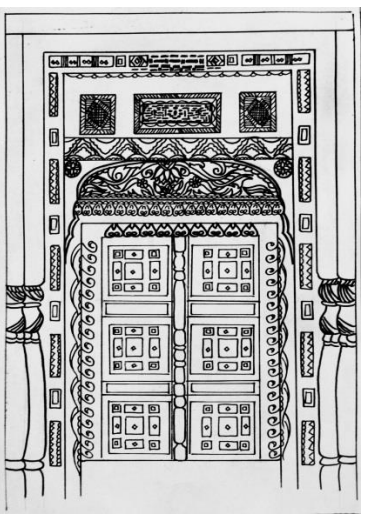


Fig. Pencil Sketch. Nila Village Door 2

Pl. 10

10a. Painted and lacquered ceiling, Nila Village, Chakwal

10b. Painted and carved wooden ceiling, Nila Village, District Chakwal

Pl. 11

11a. Plantation in the buildings: Rawalpindi

11b. Capital of the pillar, meant for flower pots

Pl. 12

2a. Hassan Abdal Water Pond

12b. Ghaznabad water pond, showing bastioned waterway and modern shops in background

Pl. 13

13a. State of Preservation: Upper Balcony, Soojan Singh *Haveli*, Rawalpindi

13b. State of preservation: Soojan Singh *Haveli*, Rawalpindi

-5-

Buddhist Traditions in the Rock Art of Sindh, Pakistan

Zulfiqar Ali Kallhoro

Abstract

This paper deals with the Buddhist traditions that are found in the rock art of Sindh. The Khirthar Mountain Range, which separates Sindh from Balochistan, is rich in ancient petroglyphs. They are found in all valleys or Nais of the mountain range. Before the Arab conquest of Sindh, the region where rock art is found was called Budhiyah, the land of Buddhists. It is here where one finds the remains of many stupa and petroglyphs in the valleys of the Khirthar Range. First, I will describe the history of Buddhism in Sindh. Secondly, I will discuss the stupa, monastery, shrine images and other auspicious Buddhist symbols that can be seen in the rock art of Sindh. The stupa and monastery images are drawn on the rock shelters, caves, rock walls and boulders that are situated in different valleys of the Khirthar Range. Some petroglyphs of Buddhist shrines are interesting. The legend of three deities is depicted on Huviskha (a Kushan ruler) Period coins. The gold coins found from Gandhara depict three deities: Skando-Kumaro, Bizago and Mahaseno. Mahasenois shown standing under a canopy or niche flanked by Bizago and Skando-Kumaro. The petroglyphs at the Loi Dan rock-art site of Sindh possibly represent the legend of the three deities and appear to have been executed during the Kushan Period. The Kushan ruled over Upper Sindh from 78 to175 A.D. I will also discuss the Buddhist shrine in detail.

Introduction

Sindh was the home of the Buddhist religion in Pre-Islamic Sindh. Before the Arab conquest of Sindh, Buddhist stupas and monasteries dominated the landscape of Sindh. Even after the Arab conquest, the Sindhi Buddhists enjoyed religious liberty. Muslim sources on Sindh, especially Chachnamah, refer to Buddhist as Sumaniyah. Maclean (1989) believes that the Muslim writers utilized Sumaniyah

as a designation both for Buddhism as a religion and perhaps more commonly for groups of Buddhists. Moreover, he believes that the term was often in opposition to *barahimah* (Brahmanism, or Brahmins) in Muslim discussions of the religions of India (Maclean 1989:5). The Chachnamah also uses two other specifically-Buddhist technical terms transliterated into Persian: *bhikku* and *nava-vihar* (Maclean 1989:6).

There were several religious buildings erected by the Buddhists in Sindh which included monasteries, stupas and shrines. The Buddhist pilgrim Hiuen Tsiang who travelled through Sindh shortly before the Arab conquest, enumerated the sectarian affiliations of Sindhi Buddhists. According to his account, there were 460 Buddhist monasteries with 26,000 monks in greater Sindh. Of these, ten monasteries (with no monks) in Multan were in ruins, while 100 monasteries with 6,000 monks in Makran were inhabited jointly by Mahayanists and Hinayanists. The remaining 350 monasteries, 33 stupas and 20,000 monks all belonged to the Hinayana school known as the Sammitya. According to Hiuen Tsiang, Sindh, with almost half of all Indian Sammitya monks and monasteries, was the major centre of this school in the Indian subcontinent (ibid:7-8).

The traditional enumeration of Buddhist Schools lists the Sammitya as one of the four subdivisions of the Vatsiputriya which was itself a branch of the sthavira. The Sammitya, most important of these Vatsiputriya schools, was often termed "Puggalavadin" (Personalist) after its most characteristics tenet: the belief in the actual existence of a person. While the Sammitya was the major school of Sindhi Buddhism in terms of numbers and influence, there were small communities of Buddhist monks in the region who belonged to other schools. Hiuen Tsiang mentions adherents of the Hinayana intermingled with Mahayana in Eastern Makran, although he does not specify their precise sectarian affiliation. He does note however, several Sarvastivadin monasteries contiguous to Sindh, including Iran (ibid:8).

As evident from the historical accounts of Hieun Tsiang, Sindh was the home of Buddhism and a number of the monasteries and stupas show how well-represented and influential the Sindhi

Buddhists were before the Arab conquest of Sindh. Several Buddhist structures have been discovered in different parts of Sindh. Many of them were discovered by British administrators and archaeologists and a few were found by Pakistani archaeologists. "Kahu Jo Daro", a stupa-and-monastery site, was first noted by General John Jacob, then Acting Commissioner of Sindh. Later, in 1859, James Gibbs described the site as the remains of a brick platform or "thul". However, the stupa was excavated by Henry Cousens then Superintendent of Archaeological Survey, Western Circle (1909-10) (Mukeerjee 2008:64). More Buddhist stupas at Sudhern Jo Thul, Mir Rukan and Kaffir Kot were also discovered. The stupa at Sudhern Jo Thul was first noticed by Frere and the Thul Mir Rukan was first examined by John Jacob, the then Acting Commissioner of Sindh. The Buddhist remains near Jhirak were first studied in 1852 by W. Cole, then Deputy Collector of Karachi (Cousens 1998:81-87). Stupa remains at Depar Ghangaro and Brahmanabad (Mansurah) in Sanghar District were also discovered and studied by Colonial-Period administrators and archaeologists. Apart from the stupa remains in Lower and Central Sindh, some remains of stupas and monasteries were also studied by the colonial administrators in Upper Sindh which included the stupas at Moen Jo Daro, and Damrah Jo Daro. Veradi, an Italian archaeologist, also visited many Buddhist stupa and monasteries remains. He also mentioned the stupas of Koryani near Badin and Khejrari near Umarkot. He argues that plaques found from the stupas of Koryani and Khejrari are similar to those found at Kahu-Jo Daro in Mirpurkhas (Veradi 1986:541).

The Sirni stupa remains in Nawabshah have also been studied by many archaeologists and scholars (Bukhari 2001, Ansari 2011). I also discovered a few stupa remains in the Khirthar Range and in the Kachho region of Sindh. Kachho lies between the Indus River and Khirthar. The Kachho and Khirthar regions were the ancient Buddiyah which writers mentioned in their historical accounts. It was first remarked on by the Chachnamah. Chachnamah also mentions some influential Buddhist families who were powerful in Budhiyah. According to Chachnamah, a certain 'Kakah' family of Buddhist monks (bhikshus) north of Siwistan (modern Sehwan) on

the west of bank of the Indus, exerts religious and secular authority in the region of Buddiyah **(**Baloch 2011:147-148). This Kakah family also gave asylum to Bhojarai, the ruler of Mauj near Sehwan and cousin of Dahir, who fled to Buddhiyah when the Arabs attacked his fort at Mauj (Dani 1979:34; Abbasi 1979:168).

The ancient Buddhiyah of the Buddhists now comprises the Khirthar and Kachho regions of Sindh, both lying west of the Dadu District in Sindh. This is evident in the argument of Dani who, following the description of the Chinese pilgrim Hiuen Tsang, believes that the monks were said to dwell in deserts, mountains and forests, implying that the Buddhists had spread out from the eastern desert of Sindh into the mountainous region of Kirthar (Khirthar) as well as below the foothills along the Kachchhi Plain (Dani 1979:26). The Kachchhi Plain is now located in the Jhal Magsi district of Baluchistan, while Kachho, which also runs along the foothills, is located in Sindh and comprises the present two districts of Larkana and Dadu.

Both Kachho and Khirthar are dotted with Buddhist remains. There are several remains of stupas and monasteries in the Kachho region which were hitherto unknown. I have also discovered some Buddhist sites. Returning from Khirthar in March 2012, I discovered a large number of decorated and moulded bricks that were exposed by torrential rain. I had already visited the site (locally called "Dim Jo Daro") twice in 2010 and 2011, but there were only a few painted potsherds at the site. It was difficult to know anything about the remains of the *thull* until I found the decorative bricks similar to those found at the stupa and monastery remains of Kahu Jo Daro and Sudhern Jo Daro. This recently-discovered stupa site is 10 km east of the Gaj Valley in the Khirthar Range.

There are several *Nais* in the Khirthar Range which were once inhabited by Buddhists as evident from the symbols drawn on the cliffs, rock shelters, caves and boulders. These religious symbols include the petroglyphs of stupas, monasteries, shrines, a swastika, lotus flowers, Dharmachakara, treasure vase, mandalas etc. I argue that these Buddhist petroglyphs were not just drawn by the mobile people or travellers--they were certainly drawn by travellers, pilgrims and the settled population of Buddhists in the different

valleys of the Khirthar Range. Several *Nais* flow throughout year and they never dry. This is one of the reasons that one finds so many Buddhist petroglyphs indicating that the Buddhists inhabited these valleys. These *Nais* and valleys are still inhabited by Sindhi and Baloch people who remain in the Valley throughout the year with their herds. However, they keep moving from the lower Valley to the Upper Valley in search of pastures.

Although Buddhist petroglyphs are found in several *Nais*, they are more numerous in the Nali and Gaj Nais. This does not mean that there are no Buddhist petroglyphs in other valleys. Such petrogylphs are found in almost every *dhora* and *dhori* of the *Nai* where there are the other markings. The Gaj and Nali are large *Nais* where the people were engaged in the cultivation in past times. People still cultivate wheat and other crops in both of the valleys.

One does not find any image of the "Buddha" in the petroglyphs of Khirthar. As discussed above, the Sammitiya sect of Hinayana Buddhists dominated in Sindh. However, later in the 7th century, both sects of Buddhism (Hinayana and Mahayana) intermingled. There was no image worshipped among the Sammitiya sect of Hinayana Buddhism. This is one of the reasons that we do not find any image of the "Buddha" in the rock art of Sindh. Only later, when the Hinayana and Mahayana intermingled, they made the Buddha image in Sindh and one finds these images at Kahu Jo Daro. However, in the rock-art sites, there is not a single Buddha image drawn on the rocks. Instead one finds the religious symbols like stupa, viharas, treasure vase, Swatika, lotus flower and Dharmachakara. Therefore, I will only discuss the stupa architecture and its development in the detail and pay less attention to other religious symbols like viharas and shrines.

Stupas

There are two forms of stupa in rock art: domed and tower-like. There are only a few specimens of the domed stupa while the majority belongs to the tower-like stupas. There is a variety of styles in the tower like-stupas. These are further classified into small and large. A 'small' stupa is just a one or two-storey structure (with a dome or without a dome), while a 'large' stupa is a multi-tiered

building (either with or without a dome). The stupa images provide information about the form of those that existed in Pre-Islamic Sindh. I have documented 1,246 images of stupas in the Khirthar Range.

The earliest representations of stupas are only found in the Nali Valley. The earliest representation of a stupa is seen in the rock art of Gapter in the Nali Valley (Fig. 1). This is a domed structure with a hemispherical dome topped by a *harmika*. This style of a domed stupa corresponds to the 1st - 2nd century A.D. Therefore one can argue that this petroglyph was drawn most probably during the Kushan Period. However, some canonic features are missing in the representation, as one does not find a *sopana* (stairway) or a *chattra* (parsol). One finds the evolution of the Sindhi stupa from the hemispherical to circular dome in the 4th century A.D as noticed in one of the stupa petroglyphs at Pipal Kumb in the Nali Valley (Fig. 2). It has four square platforms with a recess topped by four receding storeys. The *anda* of the stupa rises from the fourth storey. This *anda* is topped by simple a *harmika* without a parasol. Interestingly, the recess of the stupa is decorated with a floral scroll. There are six more stupa images at the Pipal Kumb. There is another form of stupa that appears in the Chuchar Dhoro of the Nali (Fig. 3). This stupa is shown with pillars similar to the Gandharan stupas. One also finds the representation of such stupa image in Chilas II (Jettmar and Thewalt 1987:16). The pillared stupa in the Chuchar Dhoro is quite an interesting representation with a broad base. The *anda* rises from the base of the stupa which rests on a broad drum. Two pillars are shown on the sides of the stupa and two others rise from the corners of the dome which means that the stupa is surrounded by four pillars. A large finial rises from the dome. The capitals of the pillars are unusual. This representation does not look like any mosque. Rather, it is obvious from the architecture that it is the earliest form of the stupa that is drawn on the cliff of the Chuchar Dhoro. This type of stupa is dated as the 1st century A.D. However, this form of the stupa did not spread to other valleys of the Khirthar.

We find another form of stupa at Kalri, east of the Pipal Kumb (Fig. 4). This stupa has a cylindrical dome terminating atop in a semi-circle akin to the Dhamkeh stupa found at Sarnath in India. A

similar stupa representation with such a cylindrical dome is also seen at the Sado Mazo rock-art site in the Nali Valley. However, on top of the stupa an anthropomorph figure is shown, which appears to be drawn later.

A highly advanced form of a stupa is seen at Chiti in the Nali Valley (Fig. 5). The stupa is drawn on the cliff near the representation of a bull. The stupa rests on a rectangular platform, while its dome rests on four storeys and torus of diminishing size. The dome is surmounted with a *harmika* and umbrellas. The topping element above the umbrellas is a finial without a streamer. The first storey of the stupa is decorated with two lotus designs and a third storey carries a 'zigzag' pattern. This stupa contains the most advanced and refined carving found in the Nali Valley. The artist was apparently inspired by two other similar carvings of stupas at Chiti while drawing this large stupa on the cliff. The representation of a small-sized stupa is located south-west of the large stupa (Fig. 6). It is drawn on the boulder which faces south. This stupa also rests on a rectangular platform. Likewise, the *anada* rests on four storeys. The first storey of the stupa is decorated with lotus design. The third storey of the stupa is decorated with geometric designs. The topping element above the dome is a finial without a streamer. The *harmika* and the umbrellas are missing in the carving of this stupa.

The second stupa is drawn to the left of the large stupa and inside the representation of a crosslet (Fig. 7). This stupa also rests on a rectangular platform. The *anada* of the stupa rests on the three storeys and a drum. The topping of the stupa are *harmika*, umbrellas and a finial without a streamer. The distinctive feature of this stupa is the umbrellas which are shown with sloping sides. This form of the stupa did not spread to any other valleys of the Khirthar. However, a totally new form of stupa-architecture, which can be called 'multi-tiered stupa', appeared in the valley of the Gaj. These types of stupas are also found in the Ladakh and Tibet. Mani reports multi-tiered stupas from the Zanskar, near Alchi Bridge (Mani 2010). Dorajy (2010) also documented carvings of stupas from the Alchi Bridge in Ladakh (Figs. 8 & 9). However, one does not find a single petroglyph of a multi-tiered stupa in Gilgit-Baltistan as seen in Sindh, Ladkah and Tibet.

The multi-tiered stupas of Sindh can be classified as two types: 1) a type of stupa that has a dome with topping and 2) a form of stupa that is without a dome but has a topping. Both types of stupas are only found in the valleys of the Gaj, Makhi and Khurbi. The first form of the stupa is earlier than the latter forms. The first type of stupa representation is found in the Gaj Valley, which are the most advanced and refined forms that are found in various rock-art sites. The representations of multi-tiered stupas are mainly seen on the ancient route that connects the Gaj with Makhi and Khurbi. Close to this ancient route, which is variously called *Sukho*, *Kafiri* (of un-believers) and *Chiti Shayanh Wat* (route) are many archaeological remains and rock-art sites. People still travel on this route to go to Makhi, Sallari and Buri from the Gaj and it actually connects the two highest plateau peaks, the Gorakh and the Kachrak around the Gaj where people lived in the past. These areas are still inhabited by Baloch and Sindhi people. There are two different routes from the Gaj which converge at Winder Dan near Soup Kumb in the Zahargani Valley. One begins from Lorakh Lak via the valleys of Shagiri and Jatim to Zahargani. The other route starts from Shakloi Pass via either the Shakloi Valley or the Phazgar Valley to reach the Zahargani Valley. This route is still used by shepherds and travellers to get to the Kachrak Valley and beyond to the northern valleys of Sallari, Buri, Teri, Radh and Mazarani in the Khirthar Range. On either sides of the route are several boulders, rock shelters, caves and cliffs which attracted the travellers and the artists to draw the pictures of animals, humans, religious buildings and whatever they observed around them. Several representations of stupas are also found at these rock-art sites.

There are ten stupa carvings on the cliff at the rock-art site of Chiti in the Gaj of which three are of the multi-tiered style. The more advanced form of the multi-tiered stupa is seen on the cliff (Fig. 10 & 10.1). This stupa rests on a rectangular platform with receding storeys terminating at the top in the form of a circular dome topped by a *harmika*, finial and decorative streamer. Another image of a multi-tiered stupa is also found on the cliff. But this rather appears to be a nonsymmetrical stupa image. The *anda* of the stupa is crowned with a finial and disc but without any streamer as seen in the earlier-

made stupas. One of the distinctive features of the stupas at Chiti are the decorative streamers. There are three such representations of stupas on the cliff that have streamers with decorative ornaments. It is possible that these ornaments may represent bells but, as evident from the shape of the ornaments, they do not look like bells. The stupa shown in the Fig. 10 has fourteen decorative ornaments. The second stupa on the cliff has eight decorative ornaments ([Fig. 11). This stupa is different in the form from the one seen in the Fig. 10. The only similarity between them is the streamer with decorative ornaments. Another stupa on the cliff has a streamer with decorative ornaments. This stupa rests on a square platform with three storeys of equal size. The dome of the stupa is crowned with a *harmika* and a finial with streamers. This streamer also has eight decorative ornaments. This form of stupa with decorative ornaments did not spread to other valleys of the Khirthar Range. However, there are several stupas of similar form but without decorative ornaments in the Gaj Valley. The petroglyph of one such stupa can be seen at Zahargani Thal in the Gaj (Fig. 12). It is a multi-tiered stupa with each of the platforms having a circumbulatory path. The dome of the stupa is crowned with a finial and topping. A stupa of similar style is also found in the Makhi Valley at several of its rock-art sites. This form of stupa became a popular model among the Buddhist artists who drew them at the various rock-art sites of Makhi and even in Khurbi Valley but, interestingly, this style of stupa did not spread to the neighbouring valleys of Sallari, Teri, Buri, Radh, Sughro, Keharji and Chhanhar. Therefore, a new form of stupa appeared in the northern valleys of the Khirthar Range. The term 'northern valleys' refer to those which lie north of Khurbi Valley and include the major valleys of Sallari, Buri, Mazarani and Seeta. In these valleys, Buddhist artists developed a new form of stupa which they drew on the cliffs, boulders and rock shelters, forms which were quite different from those seen in the southern valleys of Khurbi, Makhi, Gaj, Taki and Nali. These are also tower-like stupas with and without domes. The distinctive feature of these images is the decoration that is shown on every storey of the building. Therefore, I use the term "decorative stupas" for these fully-decorated types of stupas which are found in the valleys of Mazarani and Seeta. With

the exception of one stupa, all of the other stupas fall in the category of 'decorative stupas'. The exception is a carving of a small-sized stupa in the rock shelter at Beelo Kumb in Seeta Valley which is a three-storeyed building with streamers. Decorative stupas have been drawn at the Seeta Dath, Shaho Kumb and Beelo Kumb rock-art sites. The one found at Seeta Dath is drawn on a boulder. It is a six-storeyed stupa with a finial (Fig. 13). The lower storey of the stupa is decorated with designs of the 'cross'. The lower part of the boulder is broken and hence the one side of the stupa image is also damaged. Four dots are also shown with cross design. The second storey is decorated with two zigzag lines and dots. Vertical lines and dots decorate the third storey, while two triangles enclosing circles decorate the fourth storey. The stupa's sixth storey carries semi-circle patterns and a 'cross' motif. This is a very interesting representation of a stupa with such geometric designs. The representation of stupa at Shaho Kumb is also very impressive in terms of its decoration (Fig. 14). It is a five- storeyed building with geometric and 'sun' designs. The lower storey of the stupa is decorated with designs of the 'sun' while the second storey carries geometric designs representing circles and semi-circles. The third storey depicts semi-circles enclosing dots. The fourth has a most interesting motif of the 'sun'. The fifth storey bears patterns of dots.

A similar representation of 'decorative stupas' is also seen in the Mazarani Valley (Fig.15). In fact, there are many representations of decorative stupas in this Valley. One such decorative stupa is drawn at Sor Dakho. It is a four-storeyed stupa carrying geometric designs. The lower storey carries the vertical lines while the second storey depicts a 'cross' with circles and dots. The third storey has a semi-circle-with-a-dot pattern. The fourth storey of the stupa only depicts the dot patterns. Another stupa at Karo Dako in the Mazarani Valley carries geometric patterns that are similar to the ones seen on the stupa at Sor Dakho. However, there is a difference in the forms of the both stupas. The former has square storeys while the latter comprises both square and triangle-shaped storeys. This is a unique stupa representation in terms of style or form, both of which are not seen elsewhere in the Khirthar Range. It looks like a 'stylized' form of stupa. This stylized form of stupa gained prominence in the 7th

and 8th centuries when Buddhism was losing its power in Sindh. This stylized form of stupas can be seen in several valleys of the Khirthar Range, however, they are found in great numbers specifically at Nali, Gaj and Makhi. Some of the representations of the stylized stupas are found at the rock-art site of Hur Dhoro of the Nali.

The tradition of 'decorative stupas' spread later from Seeta and Mazarani to the Nali Valley, with a few representations of decorative stupas seen at Chiti and Hur Dhoro in the Nali. One such representation of a stupa with decoration is drawn on the cliff at Chiti (Fig. 16). It is a three-storeyed building. Geometric designs decorate this stupa's storeys. Another stupa, falling in the category of 'decorative stupas', is drawn on one of the boulders in Hur Dhoro of the Nali (Fig. 17). It is a two-storeyed stupa with an *anda* that has a human face. This is called an 'anthropomorphic' stupa. Both storeys carry a geometric pattern. One can also find an anthropomorphic stupa image at Seeta Dath in the Seeta Valley.

There are several images of stupas at Hur Dhoro which are decorated with geometric designs. These stupas are not fully decorated; they are partially decorated which means that only a few storeys are decorated while the others are undecorated. Such stupa representations mostly carry the 'cross' pattern on the lower storey.

Another form of the stupa emerged in the 7th and 8th centuries. This was a tower-like stupa with an arrow and trident-shaped toppings. They were different in form from the multi-tiered stupas. These stupa representations are seen in almost every major valley of the Khirthar Range where one finds Buddhist petroglyphs. Apart from single stupa representations at some rock-art sites, one also finds many in ensembles or rows and sometimes they are shown in pairs. However, at some rock-art sites, ensembles of 3, 5, 6 and even 8 stupa representations are also seen. At the Zahargani Thal rock-art site, there are ensembles of eight stupas which are drawn on the boulder.

Viharas or Forts?

In addition to representations of stupas, one also finds a few depictions of 'monasteries' in the Khirthar Range. As seen in the pictures, these are square and rectangular structures. Abro (2011)

calls them "viharas" but these are different from monastery architecture which is usually in the *chatushala* pattern with a central courtyard. Around the central courtyard run the monks' cells. As seen in the picture (Fig. 18), the building has three large, square rooms. The central court of the building has a large square room with the cross pattern which divides the room into four small, triangle-shaped cells. On the right of the central, the large room is another square room which is divided into square cells. The building has an opening to the south and on the north side is again a square room with dots enclosed in six triangles, probably representing cells. The outer walls have square cells, possibly representing the bastions. This was probably the fortified "vihara". On the right of this building are two 'males' with swords and shields in their hands. It appears that they are guarding the building as it was probably under threat from some other religious groups, or they might be Buddhist protectors of the vihara and other buildings, who are shown guarding against the possible invasion of the enemy/Arabs. There are few such representations of buildings with guards or invaders. There is also a petroglyph of a vihara or fort in the Chuchar Dhoro of the Nali Valley (Fig. 19). This is a square vihara with male figures on either side of the building. A third male figure is also shown approaching the vihara. This is a simple representation of a vihara without an entrance or any outer bastions or cells as seen in the Chiti vihara. However, one finds several outer cells or bastions on another petroglyph of the vihara or the fort at the Chuchar Dhoro. This is also a square building.

There is another petroglyph of a vihara at Chiti in the Nali Valley. This is a rectangular building with several rooms (Fig. 20). The central courtyard is divided into six triangle-shaped cells depicting the pattern of dots. The eastern and western sides have two rooms each with dot patterns. The northern side of the building has a semi-circle room and the southern side has a square-shaped room. The outer walls carry the square, rectangular and circular cells or bastions. This representation is drawn close to the petroglyph of the stupa. However, the patination of both depictions looks different. The vihara representation is earlier than that of the stupa, which was drawn later. These petroglyphs of the buildings do not look like the

'game boards' found in various rock-art sites in the Khirthar. 'Game boards' are quite different from the representations of the buildings. Therefore, both should not be confused and should be examined separately. One cannot say with certainty that these are representations of viharas due to the lack of inscriptions near these buildings. In the case of the stupa representations, one finds a few inscriptions. However, one finds representations of similar rectangular buildings in various rock-art sites in the Nali, Gaj and Makhi Valleys. These buildings look quite different from the viharas. They enclose the stupa representations. It appears that they are meant to be drawings of fortified stupas. One such representation of a fortified stupa is situated close to the drawing of a vihara at the Chiti rock-art site (Fig. 21). Interestingly, the patinations also look the same indicating that both were drawn by the same artist. This rectangular building encloses a domed stupa. The outer walls of the building have three bastions or cells--one on the east side and two on the west side.

The representations of the so-called viharas are only found in the two sub-valleys of the Nali Valley. Two representations, both squares, are drawn at the rock-art site of the Chuchar sub-valley and the two other representations are engraved on the cliff at Chiti in the Zeni sub-valley of the Nali Valley. Both are rectangular-shaped buildings. Therefore, I leave this discussion open to the readers and scholars to decide themselves whether these are representations of viharas or forts or some other kind of structure.

Shrines

In addition to the stupa and the so-called vihara representations, one also finds a few petroglyphs of Buddhist shrines in the Gaj and Makhi Valleys. Here, I will only discuss the Buddhist shrine in the Gaj Valley. The petroglyph of this Buddhist shrine is executed on a bedrock surface overlooking the Loi Dani Dhori of the Shakloi Dhoro. The Shakloi is a tributary of the Gaj Nai where there are a few other petroglyphs of these shrine structures. Some are possibly of Zoroastrian origin as one finds a vessel of fire inside these structures. The Buddhist shrine is distinctive for its style of structure. It appears to be a squared canopy or a flat roof building with four

finials adorning the four corners of the structure (Fig. 22) The finials terminate at the top in triad ornamentation, possibly representing the *tri-ratna* pattern. This is evidently different from the trident-shape pattern which adorns the top of the late-period petroglyphs of stupas that were created in the 7th and 8th centuries. It has an entrance which opens to the east. There are three anthropomorphic figures inside the canopy. The most important figure is shown standing under the niche or canopy of the structure. The other two figures are shown standing close to the northern and southern walls respectively. The position of their feet is reminiscent of the Kushan Period sculptures. For the comparable evidence, we have the Kushan gold coins of Huviska depicting Skando-Komaro, Bizago and Mahaseno. Therefore, on the basis of this similarity, we can call this the 'shrine of the three Kushan deities'. This particular image of the 'shrine' provides very valuable information about the religion of the people who lived in the Khirthar Range and in the plains of Sindh. The representations of similar shrines of the three deities located in the Makhi Valley and belonging to the Kushan Period show the presence of the Buddhist in various valleys of the Khirthar Range. Moreover, the Kushan ruled over Upper Sindh. Therefore, it is possible that most of these petroglyphs of Buddhist shrines were drawn during the Kushan Period.

The Dharmacakara and Other Buddhist Symbols

There are also several other Buddhist symbols that are executed on cliffs, boulders and rock shelters. They include the representations of the 'wheel of life' or Dharmachakara, a treasure vase and a swastika. There are also petroglyphs of Buddhist mandalas. Some of the representations of the Dharmachakara with eight spokes are contained in the engravings of the rock-art sites of the Gaj, Makhi, Khurbi, Chanhhar and Mazarani Valleys. Usually, representations of the Dharmachakara are found close to the drawings of stupas. Such representations are seen at the rock-art sites of the Gaj and Makhi Valleys. These are different from the drawings of the discs that are seen in the rock-art sites of Chilas and Thalpan in Gilgit. In Sindh we have only the representations of the wheel with eight spokes. As seen in Fig. 23, the wheel has eight spokes. This representation of

the wheel is drawn on a boulder which lies on the left bank of the Larkandi Dhoro at Loi Diref in the Makhi Nai.

Pictures of the Buddhist treasure vase are also found at many rock-art sites in the Khirthar Range. However, the most interesting of these treasure vases is engraved on the cliff of the Khashani Dhoro of the Taki Nai (Fig. 24). This vase has a visible base with triad-shaped designs on the top and either side, similar to the finials adorning the Kushan-Period shrine of the three deities at Loi Dan in the Gaj Valley. The treasure vase symbolizes the endless rain of life, wealth and prosperity. Apart from the treasure vase, one also finds the image of the Buddhist 'swastika'. This is a left-facing swastika (Fig. 25) which is found at a rock-art site in the lower Khashani Valley. There are several representations of the left-facing 'swastikas' mostly engraved close to the other Buddhist signs and symbols. Drawings of the lotus flower also appear at several rock-art sites.

Conclusion

The discovery of a large number of Buddhist petroglyphs shows that the Buddhists were the main religious group in Pre-Islamic Sindh. They were more powerful and influential as compared to the Hindus and *majus* or Zoroastrians. We also find the petroglyphs of the Zoroastrians, but they are few in number as compared to those of the Buddhists. Moreover, all of the major valleys were under the control of the Sindhi Buddhists (they were used as pastures for their livestock in the summer); this is evidenced by the large number of Buddhist petroglyphs at every site in the Khirthar Range. The influence and power of the Sindhi Buddhists extended from the Khirthar to Bado and Lakhi Ranges of Sindh. Religious symbols of the Buddhist are also found in Thana Bula Khan and Karachi regions. This does not mean they were not present in other parts of Sindh--they were mainly concentrated in Lower Sindh. I have been only discussing the religious symbols that we have found in the petroglyphs in the mountain ranges and hills of Sindh.

The petroglyphs provide historical and religious information about the Sindhi Buddhists. We also know, through these ancient human records that exist in the form of rock carvings, that Hinayana

Buddhism was dominant in Sindh. Not a single image of the "Buddha" has been found in the rock art of Sindh. Instead, he was worshipped in the symbolic representations of the stupa, wheel, lotus, etc. Almost all of the auspicious Buddhist symbols are found in the rock-art sites in the Khirthar Range.

However, the stupa images are numerous. They can be classified in three categories: 1) the dome stupas 2) the multi-tiered stupas with *anda* or dome 3) the tower-like stupas with or without *anda* which are the later-period representations. The first category of the stupas is of the 1st and 2nd centuries A.D. while those that are multi-tiered belong to the 6th and 7th centuries A.D. The stupas of the third category are of the 8th and 9th centuries A.D. when the Buddhists were losing their power and influence in many parts of Sindh, but it survived in the Khirthar and other mountain ranges of Sindh up to the 9th and 10th centuries.

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Fig.1 Nali Valley: Stupa image at Gaptar

Fig. 2 Nali Valley: Stupa image at Pipal Kumb

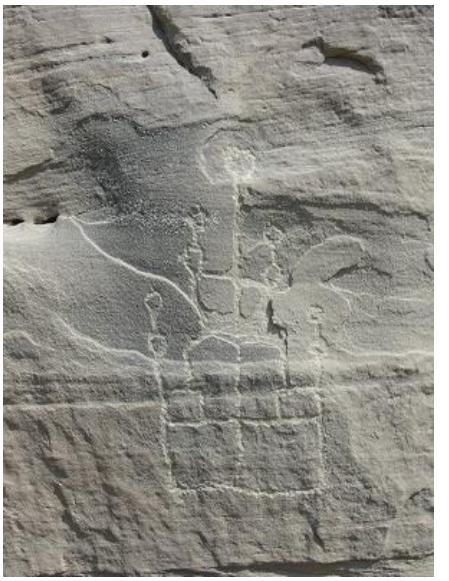

Fig.3 Nali Valley: Depiction of Stupa with pillars at Chuchar

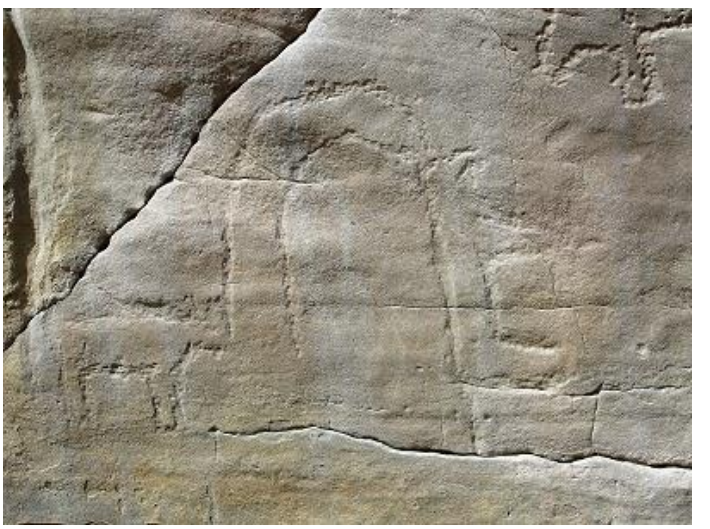

Fig. 4 Nali Valley: Stupa image at Kalri

Fig. 5 Nali Valley: Stupa image at Chiti

Fig. 6 Nali Valley: Stupa image at Chiti

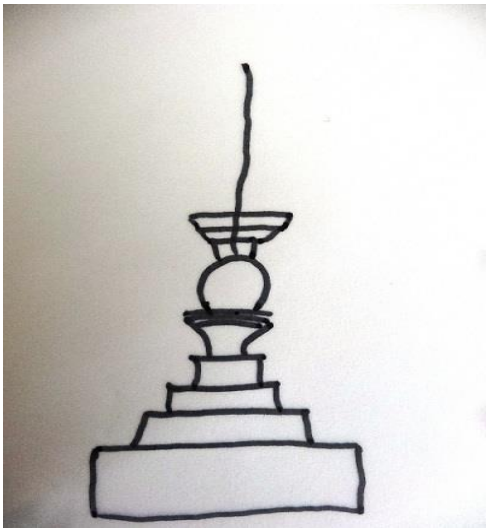

Fig.7 Nali Valley: Tracing of Stupa image at Chiti

Fig. 8 Ladakh: Stupa of 'multi-tiered style' at Alchi Bridge (Photo by Tashi Ldawa)

Fig.9 Ladakh: 'Multi-tiered Style' Stupa at Alchi Bridge (Photo by Tashi Ldawa)

Fig.10 Gaj Valley: Stupa image at Chiti

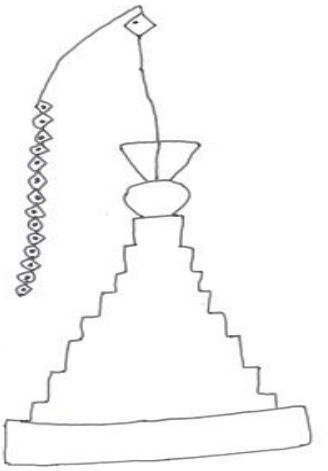

Fig.10.1 Gaj Valley: Tracing of Stupa at Chiti

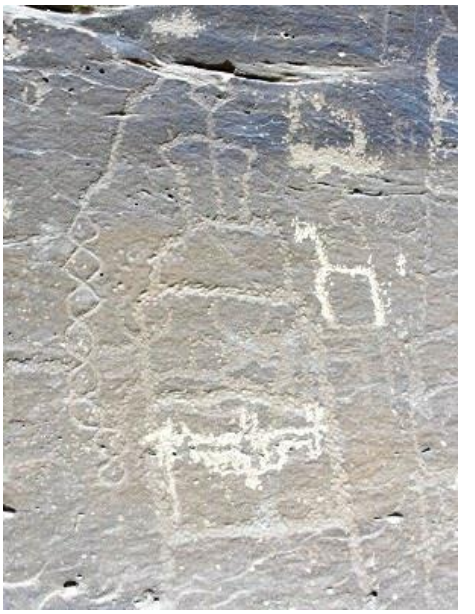

Fig.10 Gaj Valley: Stupa image with decorative ornaments at Chiti

Fig. 11 Gaj Valley: Stupa image with decorative ornamnets at Chiti

Fig.12 Gaj Valley: Multi-tiered Stupa image at Zahargani Thal

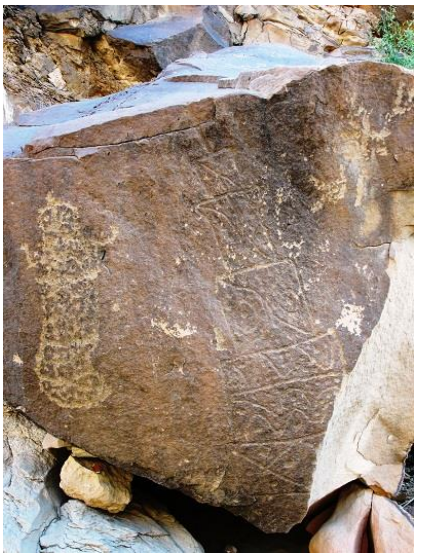

Fig. 13 Seeta Valley: Stupa image at Seeta Dath

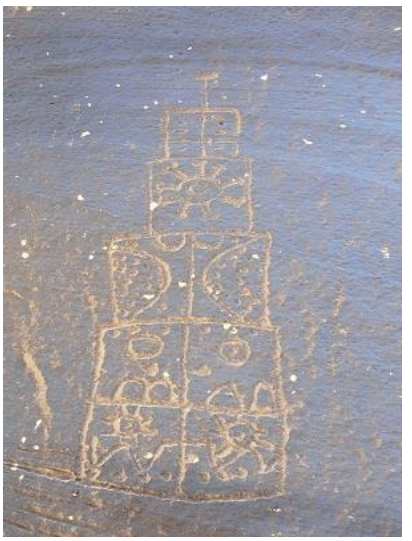

Fig.14 Seeta Valley: 'Decorative Stupa' image at Shaho Kumb

Fig.15 Mazarani Valley: 'Decorative Stupa' image at Sor Dakho

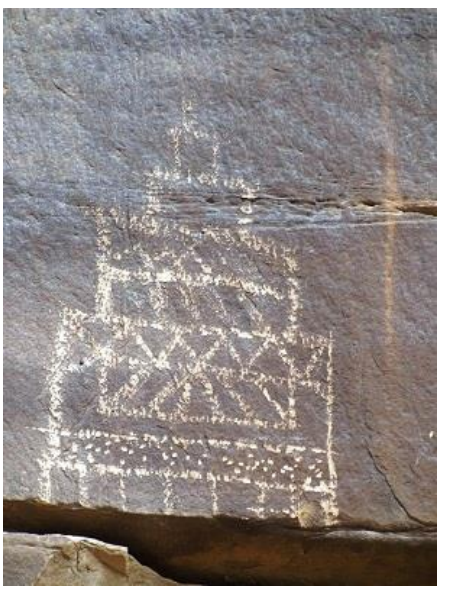

Fig.16 Nali Valley: 'Decorative Stupa' image at Chiti

Fig.17 Nali Valley: Anthropomorphic Stupa at Hur Dhoro

Fig. 18 Nali Valley: Representation of so-called Vihara at Chiti

Fig. 19 Nali Valley: Depiction of so-called Vihara at Chuchar Dhoro

Fig. 20 Nali Valley: Depictions of Stupa and so-called Vihara at Chiti

Fig.21 Nali Valley: Representation of fortified Stupa at Chiti

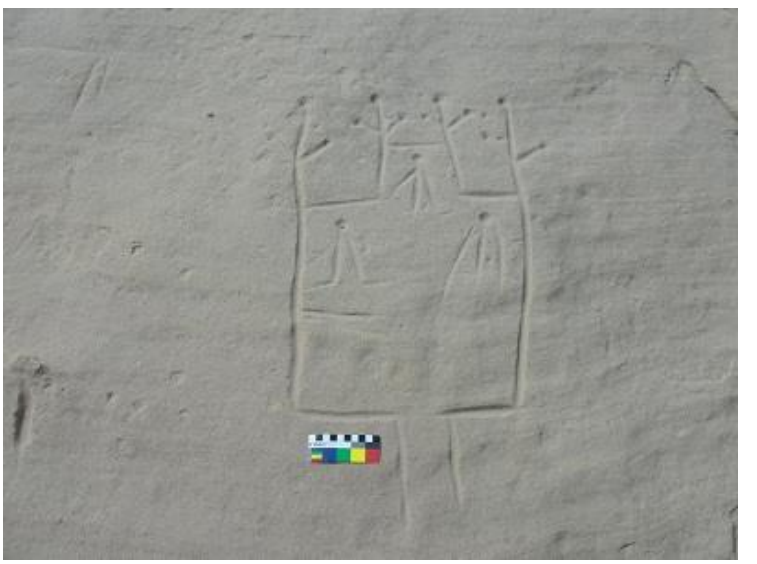

Fig.22 Gaj Valley: Petroglyph of the shrine of three deities at Loi Dan

Fig.22.1 Gold coin of Huvishka from Gandhara depicts three deities (after Gobl, R Fig. 157)

Fig. 23 Makhi Valley: Representation of dhramachakara at Loi Diref

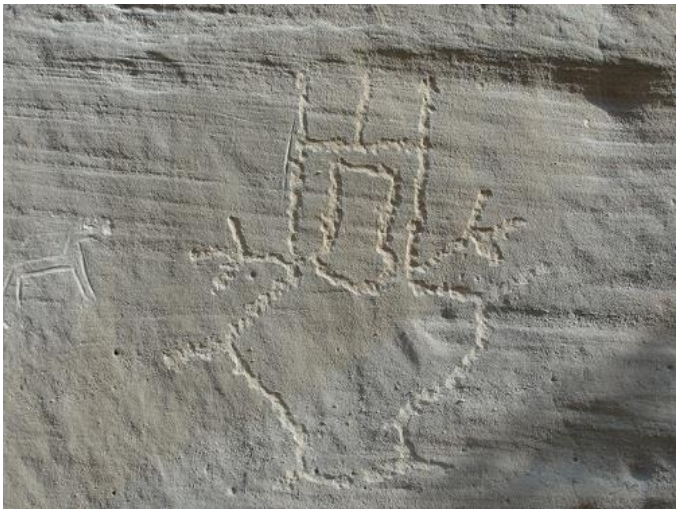

Fig. 24 Khashani Valley: Depiction of treasure of Vase at Khashani

Fig. 25 Khashani Valley: Representation of Buddhist Swastika at Khashani

-6-
Numismatic Evidence from Sari Dheri, Charsadda: Study based on Gordon's Findings

M. Ashraf Khan and Gul Rahim Khan

Abstract:
The old discovery of coins made at one of the site of Pushkalavati (Charsadda) in the first half of twentieth century was long disappeared from the eyes of scholars. This important data came into the hands of author when he was conducting his Ph.D research on the terracotta material. With the kind permission of the Brussels Museum (Belgium) the photographs of this site, the only available data, are hereby utilized to highlight the coins found at Sari Dheri (or Sar Dheri), Charsadda.

Twenty eight coins are known to have reported from the archaeological site Sari Dheri, Charsadda. The site has been well known for the terracotta figurines first published by Major Gordon (Gordon 1932: 163-171 & 1935: 117-18) and then by others (Corbiau 1937: 1-10 & Gupta 1946: 1-4). The site called by the name Sari Dheri was often published in the previous reports (Gordon 1932 & 1935; Corbiau 1937 and Gupta 1946) but now Sar Dheri is commonly spoken in local dialects (Pashtu). The site is about 10 km northeast from Charsadda city and located on the main road leading to Mardan.

In view of the scientific field work of Corbiau the present authors earlier thought that the coins were collected by the excavator who conducted survey and excavations at the site in 1936. She carried out limited excavations by means digging four small pits at the eastern mound and completed the one measuring 6x3 yards from top to bottom (Corbiau 1937: 2). She soon managed to publish some notable findings particularly the terracotta figurines recovered from there (Corbiau 1937: 1-10, Gupta 1946: 1-4). She planned to publish a complete report of her discoveries but she couldn't finish the things in due time. Moreover, she never mentioned about the coin findings in her report and further added that the findings of Major Gordon were studied by the University of Brussels (Gupta 1946: 2). Now it is evident from the publications of Gordon that these coins were collected by him during his field campaign at the site under

discussion. He briefly referred to by one legible and good coin of Azes II (no. 4) which by typology was similar to that published by Rapson (1922: no. 45. Pl. VIII; Gordon 1932: 169). He further added that few more coins were also found there. It can be confirmed from the finding of present photographs that the coins under discussion came from the collection of the University of Brussels. In resent past the present author (M. Ashraf Khan) while conducting an analytical study of the figurines for his Ph.D study also included the terracotta stuff recovered from that site. During this research the author also collected photographs of the coins unearthed from the site of Sari Dheri. In respect of available data these are unpublished and important coins reported from the proper context and worthy to be published here in to knowing the nature, scope and sequence of the site.

In view of the numismatic material, four coins are of silver and twenty four copper. The silver coins (nos. 1a-1d) seem to be a small hoard or part of a hoard or recovered as a single finding obviously belong to the period of Azes II, last ruler of the Indo-Scythian dynasty. In view of the copper distribution two coins (nos. 2a-2b) belong to Azes II and remaining (22 coins) to the Kushan period. The Kushan coins can be assigned to the late phase of great rulers which include the coins of Vima Taktu, Huvishka and Vasudeva I. Accordingly the collection represents one coin (no. 3a) of Vima Taktu, four (nos. 4a-4d) of Huvishka and seventeen (nos. 6a-6c) of Vasudeva I. As evident from the number, the coins of Vasudeva are comparatively common in this collection.

The silver coins of Azes II commonly depict mounted figure of the king with whip on the obverse. On their back side (reverse) we see figure of Zeus Nikephoros in three examples (nos. 1a-1c) and Athena (no. 1d) in one specimen. Mitchiner attributed Zeus Nikephoros coins to the Taxila Mint-B and Athena to the Sirsukh mint (Taxila). Similarly the copper coins bearing bull on one side and lion on the other also assigned to the Sirsukh mint (Mitchiner 1976/6). Gordon rightly identified one coin for Azes II (no. 4) bearing reverse figure of Athena, with a reference to the coin illustration made by Rapson (1922, no. 45, pl. VIII).

A single coin of Vima Taktu, displaying portrait of the king (or Mithra) on the obverse and mounted figure on the reverse belong to the common category. It bears three-pronged symbol on both sides and the reverse is inscribed with cursive style of Greek writing. In respect of shape and size it seems to be a full unit (8.00 gm) coin. All coin of Huvishka in terms of style, figures and *tamga* might be the issues of the last phase of his coinage. Of these, three coins (nos. 8, 9 and 10) bear figure of the king riding on elephant on the reverse with different reverse deities i.e. Mao, Miiro and uncertain deity can be assigned to the Gandhara mint (Khan 2011: 209-34). The fourth one (no. 11) exhibits king reclining to left on the obverse and Mao on the reverse can be assigned to the second phase of main mint (Bactria). As far as the coins of Vasudeva are concerned they can be attributed to the late phase production of the king. Most of the coins are defaced but they stylistically belong to the late phase issues. Similarly two coins (nos. 14 and 15) bear Soter Megas *tamga* and four coins (nos. 16, 17, 18 and 19) *nandipada* symbol on the obverse obviously are outcome of the late series of Vasudeva I (Khan 2010: 53-55, chart-A).

Looking to the contents the earliest coins of this site can be placed in the end of the 1st century BCE or beginning of the 1st century CE and the latest in the first quarter of the 3rd century CE. However, coinage of the 1st century related to the period of the Indo-Parthian rulers and early Kushan kings like Kujula Kadphises, Vima Kadphises and Kanishka are completely absent from the site under discussion. It is difficult to say surely about the discovery of collection because it didn't come through proper excavations as the author picked them up from the surface or cut section of the mound or purchased them from the local people as known from the nature of Major Gordon's survey and report. Accordingly it is difficult to establish an accurate profile of this site. However, the available numismatic evidence suggests that the silver coins of Azes II were discovered in the form of a small hoard or part of the hoard and the copper coins of the same ruler, which are common, would have been collected from the surface or disturbed levels. Similarly the Kushan coins, which apparently show concentration to the periods of Huvishka and Vasudeva I, would have been picked up from the

upper levels of the site as they reveal a proper sequence of the rulers and their coinage. If the numismatic findings don't extend beyond the late issues of Vasudeva I then the site was certainly abandoned with the end of this reign.

Catalogue

Indo-Scythians
Azes II
Silver Coins
1a. Mounted king/ Zeus Nikephoros

Obv. King riding on horse to right, wears diadem and chain-mail dress, holds whip in extended right hand and behind him a bow. One control mark (no. 9) is before king's head and one (no. 13) to right before horse and a dot between the legs of horse.

Greek legend: ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛ□Υ/ ΑΖ□Υ

Rev. Zeus standing frontally with head in profile to left, wears long dress with left shoulder uncovered, holds small figure of Nike in extended right hand and septre in the left across his body. One control mark (no. 4) is on the left and two (nos. 1 & 13) on the right.

Kharoshthi legend: *Maharajasa rajadirajasa mahatasa*/ *Ayasa*
Reference: Mitchiner 1976/ 6, no. 858 (f)
Coin no. 1

1b. Mounted king/ Zeus Nikephoros
Obv. As 1a, but a control mark (no. 14) is in front of bull.
Rev. As 1a.
Reference: Mitchiner 1976/ 6, no. 858 (f)
Coin no. 2

1c. Mounted king/ Zeus Nikephoros
Obv. As 1a, but control mark is uncertain.
Rev. As 1a.
Reference: Mitchiner 1976/ 6, no. 858 (f)
Coin no. 3

1d. Mounted king/ Athena

Obv. As 1a, but control mark (no. 13) to right before horse and the Greek legend possibly ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛ□Υ/ ΑΖ□Υ

Rev. Female figure standing to left, wears long robe, the right arm outstretched and holds shield and spear in the left arm. One control mark (no. 18) is on the left and one (no. 5) on the right.
Kharoshthi legend: *Maharajasa rajadirajasa mahatasa*/ *Ayasa*
Reference: Mitchiner 1976/ 6, no. 867 (a)
Coin no. 4

Copper Coins
2a. Bull/ lion
Obv. Bull standing to right, one control mark (no. 5) is above bull's back and one (no. 8) to right before bull.
Greek legend: ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΜΕΓΑΛ□Υ/ ΑΖ□Υ
Rev. Lion standing to right, a control mark (no. 2) is above lion's back.
Kharoshthi legend: *Maharajasa rajadirajasa mahatasa*/ *Ayasa*
Reference: Mitchiner 1976/ 6, no. 850 (j)
Coin no. 5

2b. Bull/ lion
Obv. As 2a, but one control mark (no. 3) is above bull's back and one (no. 11) to right before bull.
Greek legend as 2a
Rev. As 2a, but a control mark (no. 7) is above lion's back.
Reference: Mitchiner 1976/ 6, no. 850 (k)
Coin no. 6

Kushans (all copper)

Vima Taktu (Soter Megas)

3a. Bust of king/ mounted king
Obv. Bust of king to right, wears diadem and flames emanate from head and a three-pronged symbol (no. 15) behind head.
Rev. King riding on elephant to right; holds elephant's goad in the right hand and a three-pronged symbol (no. 15) before horse.
Greek legend: ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ ΣΟΤΗΡ ΜΕΓΑΣ
Reference: Göbl 1993, no. 58-66

Coin on. 7

Huvishka

4a. King riding on elephant/ Mao

Obv. King riding on elephant to right, wears diadem and low helmet, holds elephant's goad in the right hand.

Bactrian legend illegible

Rev. Male figure standing to left with lunar crescent behind shoulders, making two-fingered gesture with right hand and left resting on waist. Legend MAO is in the right field and barred *tamga* (no. 16) in the left.

Reference: Göbl 1984, no. 869

Coin no. 8

4b. King riding on elephant/ Miiro

Obv. King riding on elephant to right, wears diadem and low helmet, holds elephant's goad in the right hand.

Bactrian legend illegible

Rev. Male figure standing to left with sunrays halo behind head, making two-fingered gesture with right hand and left resting on waist. Legend MIIPO is in the right field and barred *tamga* (no. 16) in the left.

Reference: Göbl 1984, no. 859

Coin no. 9

4c. King riding on elephant/ Uncertain

Obv. As 4a.

Rev. Male figure standing to left, holds something in his extended right hand and left resting at waist. Legend is unclear and barred *tamga* (no. 16) in the left field.

Coin no. 10

4d. King reclining/ Mao

Obv. King reclining on couch to left; right foot bent on bench and left lowered on foot stool, both hands clasped before chest.

Bactrian legend fragmentary ….NOPAO……..

Rev. As 4a.

Legend MAO (down) to right and four pronged *tamga* to left.
Reference: Göbl 1984, no. 836
Coin no. 11

Vasudeva I

5a. King at altar/ Oesho with bull

Obv. King standing frontally with head in profile to left, wears pointed helmet, chain-mail dress, right hand sacrificing over altar, left holds trident and another trident stands in the left field behind altar.

Bactrian legend ÞAONANOÞAO BAZOΔHO KOÞANO

Rev. Two armed Oesho standing facing holds diadem in extended right hand and trident in raised left, behind him bull standing to left. Legend in the left field is off flan and *tamga* (no. 17) in the right.

Reference: Göbl 1984, no. 1002
Coin nos. 12, 13

5b. King at altar/ Oesho with bull

Obv. As 5a, but Soter Megas *tamga* (no. 15) is added in the right field.
Rev. As 5a.
Reference: Göbl 1984, no. 1003
Coin nos. 14, 15

5c. King at altar/ Oesho with bull

Obv. As 5a, but *nadipada* symbol (no. 19) is shown in the right field.
Rev. As 5a.
Reference: Göbl 1984, no. 1004
Coin nos. 16, 17, 18, 19

5d. King at altar/ Oesho with bull

Obv. As 5a, symbols not visible in the field.
Rev. As 5a.
Reference: Göbl 1984, no. 1002
Coin nos. 20, 21, 22, 23, 24, 25, 26, 27, 28

Table: Control marks appeared on coins

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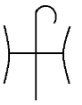
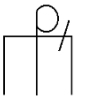
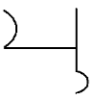
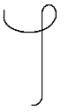
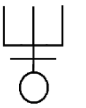
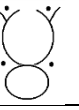
6. 	7. 	8. 	9. 	10. 
11. 	12. 	13. 	14. 	15. 
16. 	17. 	18. 	19. 	

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-7-

Tribal culture in Contemporary India: Continuity and Change. A case study on Apatanis of Arunachal Pradesh

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Introduction and Methodology

This paper proposes an analysis of religious practices among the Apatanis tribes of Arunachal Pradesh (India) in the context the of the ongoing processes of social change in contemporary India and their resulting issues.

The religion of the Apatani group can be considered a paradigm because – just like many other groups of *adivasis* of India – it still preserves archaic shamanic[1] traditions of great scientific interest which today are quickly disappearing as a result of modernization processes.

In order to understand the peculiarities of the shamanic expressions found in Northeast of India, any discussion about the tribal religion must be first situated in the context of the history and cultural complexity of the whole region. In modern India – and in the rest of the world alike - religion, in spite of the conventional understanding of modernization as secularization, continues to play a major role in politics, society and culture. Indeed that role appears to be increasing rather than decreasing and hence in recent years there has been a flurry of academic activity around such ideas as "political religion", "religious nationalism" and "post-secular society". In broad terms, religion appears to be an increasingly important component of public culture rather than a matter of private belief and practice (Turner, 2010:1).

In the first part of my work I expose my ethnographic research and summarize some of the results of the anthropological fieldwork I carried out in the area (from 2003 to 2006): adopting an

[1] I will not enter here into the debate about the definition of shamanism. I use the term in a conventional way, gathering together the general features usually inscribed in the Central-Asian model of 'shamanism' (Basilov, 1999: 17-40).

emic perspective, I participated actively to the rituals and interviewed numerous tribal *pujaris*.

In the second part of the article, I propose a theoretical approach to the study of nationalism and ethnicity and analyze how ongoing transformations have distorted the local religious heritage by transforming it into a sort of socio-political identity platform. The case of Northeast India can be paradigmatic of many scenarios of the Indian subcontinent.

Regional Background

The Seven Sisters states are a region in the North-Eastern India frontier characterized by a high percentage of the population of tribal origin (denominated as *adivasis*, 'aboriginals', by Gandhi and today ST-*Scheduled Tribes* by the Government of India). The region comprises the states of Arunachal Pradesh, Assam, Meghalaya, Manipur, Mizoram, Nagaland, and Tripura. After the 1962 Indo-Chinese war, China claimed territorial rights on this savage region due both to its strategic position and to its wealth in natural resources. Separated by the rest of the Subcontinent by the Bangladeshi border, the North-Eastern frontier has suffered for decades a condition of administrative isolation from the rest of India and a chronic lack of development planning. Caught in a reality amidst the twenty-first century Indian economic boom and a virtually uncontaminated eco-systems that can survive only thanks to special laws and projects aimed at the preservation of forest areas and their related resources, those tribes are struggling to preserve their culture, the very existence of which is increasingly endangered. With a long tradition of inner tribal wars, the Seven Sisters still host a number of separatist ethnic movements. The ethnical and cultural identity of indigenous minority groups has been often used to foster such pushes. Yet, despite the exploitative nature of those efforts, indigenous tribes have managed to remain the only depositaries of the local ancestral cultural heritage, including a form of archaic shamanism rooted in the most ancient forms of Indian religious tradition.

The middle section of the district of Lower Subhansiri, in the heart of Arunachal Pradesh, is known as the Apatani tribe territory.

Probably thanks to a not-too-inaccessible territory, especially if compared to the neighboring jungles, this community is regarded as one of the most important and best known of the region. These peoples claim to come from an ancient background, traditionally dating back to the mythical ancestor of Abo Tani, who - it is said - came from the Northeast or from Tibet. This is the most probable hypothesis about the origin of that population who still speak a language belonging to the Tibeto-Burmese family.

Apatani settlements - there are seven main villages - are spread in the forest zone that runs from Hapoli to Ziro: an area that as a whole is today precisely known as the *Apatani Valley*. Subject to heavy rainfall during the monsoon, the Apatani's territory is densely covered by the jungle and crossed by rushing streams flowing from the slopes of surrounding hills, which reach a maximum altitude of 1600 meters. The main stream running through the area is known as the river Kele or Kley. It is interesting to note that the English, who first explored the area during the first half of the last century, found the contrast between the open and lush territory of this tribe and the rugged and inaccessible roads climbing up on the forested surrounding areas. This contributes to creating the romantic myth of the 'Lost Valley', so that someone wanted to identify this area with the mythical Shangri-la (Blackburn, 2003: 335-66). Here, in the dense forest inhabited by all kinds of wild animals, the *mithuns*, the sacrificial giant bison of the mountain populations, graze free. Here the jungle seems to keep the passing clouds that hang on the trees like the spirits who live in it.

The houses and the villages

The villages of the Apatani are generally quite populous; many clans live together in the same settlements by building their homes grouped into distinct neighborhoods[2]. The houses are made on a high wooden pile supporting a wide platform on which a hut with a sloping roof is built. The spacious interiors consist of a single room where the private life of the family takes place. Sometimes panels of woven leaves separate the main hall from a small anteroom for the

[2] In Apatani language the term for clan/extended family is *halu*, however many lineages have further subdivision called *tulus* (Singh, 2001:66).

storage of water jugs and plows or other tools. While on the inside walls hang the skulls of sacrificial victims and hunting trophies, the fireplace is usually located in the center of the hut, on a stone slab surrounded by boulders. As the vast majority of tribal communities in India, also the Apatanis build windowless houses: the only openings to the outside are the parallel doors placed in the front and in the back. We documented how such use to minimize the openings to the outside is aimed at creating an atmosphere as intimate and welcoming as possible, but at the same time impermeable to external influences. Indeed it is widely believed that any opening in the house is a potential gateway for the evil spirits or dangerous entities. That is the reason why the closed interiors are often smoky and a heavy soot sediments on the walls as well on the various tools for everyday jobs hanging from the ceiling on woven straw. The access to the hut is secured by a long ladder that consists of a trunk - leaning on the ground at one side and on the platform at the other - carved in section so as to form rudimentary steps.

This type of structure on pile dwelling is widespread in Arunachal Pradesh, although differences can be found in other areas and among different tribal communities in the shapes of either the interior or of the outside. It's interesting to note that this technique of building houses is peculiar to this region and bonds, for strictly functional reasons, cultures and peoples of different origins. According to this point of view, the North-Eastern border of India differs from the rest of the Subcontinent in which, in tribal context, the mud building technique is used almost anywhere else.

The forest belt covering the steep Himalayan slopes of the region is indeed a heavily sultry environment and the structure on pile dwelling offers a protection against humidity. During the monsoon season this type of housing is resistant to heavy rain: the water slides above and below the house assuring a relatively dry inner space. For this reason, the inhabitants of the tribes prefer to build their own homes not in the center of the valley or close to watercourses but rather on the steep and rugged terrain, where the very structure of the piles is perpendicular to the slope of the territory. We found examples among Nishi, Miji, Hill Miri and Adi Gallong groups.

Among the Apatanis is believed that the favorable time for the construction of the new dwelling is from August to December. The villagers help the householder in the collection of the wood and bamboo needed for construction. When the work is over, they usually celebrate a collective festival of the clan under the strict supervision of the head of the village. Rice, meat, cereal and beer are offered to all participants during the banquet for the inaugural ceremony of the new dwelling. Then they celebrate rituals in which some chickens are sacrificed and offered to their ancestors for the welfare of the whole family. This ritual is a formal invitation to the spirits of the clan to take residence in the new house, thus ensuring prosperity and protecting it from any tragedy or disaster.

The pile dwellings that seem to loom on the main path, then snake along side streets in the dirt. These same streets look somehow to divide areas reserved to different clans. Often in many tribal communities of India, the collective life of the various families is spent in the central area of the village, a kind of yard or open space which has a social function for interpersonal relationships between clans and for the worship. At the village of Hang, one of the largest settlements, this dynamic seems to apply several times because each quarter has a yard with a raised platform (*lapang*) for the assemblies of the group. The sub-division into clans seem to be a very strong feature of the Apatanis culture so that that same meeting platform regularly holds a huge totem pole dedicated to the memory of the ancestors of the same lineage. Other small totems overlook the individual huts and are dedicated to the memory of the dead of each family.

On the main podium of the village is held the *buliang*, which is the traditional council of the tribe. The meeting is chaired by the so called *akha buliang*, a senior who serves as supervisor and general counselor. The *yapa buliang*, however, is the member that has the task of leading the discussion trying to resolve the disputes. All the other participants are spokesmen of householders or clansmen. These are called *miha* or *ajang buliang* and are chosen to bring to the assembly the opinion of the elders. Finally, every decision must be discussed and approved at the presence of the *gaon bura*, the chieftain, who usually sits at the foot of the totem pole

(Fürer-Heimendorf, 1980).

Is well known that in the past there was the custom to tie strong ropes at the edge of the totem pole of the assembly's platform and stretch them to the ground at several meters of distance from those same piles. During special collective festivals, the bravest warriors tried their hands at a reckless test that consisted in projecting themselves into the air and performing various stunts while firmly holding the rope. A test of courage and determination not without some risk. Due to frequent accidents, it is reported that this particular practice is now in disuse since a few decades.

Shamanism and the cult of ancestors

The worship practiced by the Indian tribes of these regions is fundamentally the shamanism. Alongside a forest inhabited by ancestral spirits and deities, the cosmos is imagined to be bipartite between the world of the living and the one of dead. The Underground, a dimension diametrically opposite to the surface, is where it is believed to outspread the kingdom of the dead, the final destination of the souls of the departed, who will become guardian of their descendants.

Shamanic practices, loosely addressed as 'cult of the dead' or 'ancestors worship', present a wide range of features which are in fact shared with other Indic *adivasis*: the destiny of the soul after death, the chthonic path of the dead towards the realm of the forefathers, funerary ritualism (from cremation to memorial megalithic stone erection), animal sacrifices, exorcism and healing sessions to restore a disturbed order. According to the shamans, the space surrounding men is a succession of different layers. These intersect the territory of the tribe and gradually become rarefied and subtle, eventually turning into an aerial dimension where the spirits of the forest or the dead (i.e. the ancestors) live. On the one hand the wilderness is the wooded territory delimiting the village boundaries and the place of residence of the spirits of nature who preside cyclical manifestations. On the other, the fields and the terracing for the cultivation of the rice, as deputed places for agricultural work, are the abode of the ancestors of the clans.

Among the Apatanis, the same thing is intended for the

platform of the village meetings where the totem pole of the lineage of the clan stands. However the two quarters are not strictly separated. The boundary between the village and the forest is guarded by the *udemik*. These are fetishes made of grass and straw, representing the ancestors: sometimes they are merely anthropomorphic form sometimes they are adorned by the relics of the sacrifice, by miniature objects representing their belongings or even by eggshells used in rites of divination.

Outside the village, in the forest, lies the territory of natural spirits and deities that in Apatani language are called *ui* (*uhi*). They may display a benevolent or even terrific attitude towards men; so the shamans celebrate rites in their honor to appease their anger or to ensure their protection. They may be the supernatural cause of negative events affecting the village: for this reason usually courtyard animals such as chickens, pigs, etc., are sacrificed as substitutes victims.

"*When a man is ill and loses consciousness, his soul or Yalo may leave his body and stray to Neli* (Underworld). *A shaman priest, called to minister to the sick man, may trace the errant soul to the house of one of the many gods and spirits who dwell in Neli and are ever avid to draw unsuspicious souls to their sphere. Once the shaman has located the Yalo, he offer to ransom it with the sacrifice of an animal; if the spirit accept the ransom, the Yalo returns to its earthly body, and the patient regains consciousness*. (Fürer-Haimendorf 1962: 147; 1953: 37-49)

On the basis of the collected interviews, some of the names recurring in the Apatani pantheon of the area around Ziro will be mentioned here. Hilopiot is a guardian entity who dwells along the street entrances to the villages and protects the community from disasters and the influence of evil spirits. Hinu is a deity of the woodlands who can assume both a benevolent attitude as well - sometime - as an angry one: he may attack the travelers causing them cardiovascular problems, headaches, nosebleeds and hemorrhage.

The Doji spirit is considered the very essence of the forest, the deity presiding the manifestations of the nature. In his benevolent shape he takes the name of the deity *Miole* while in the furious

manifestation is known as Mioin. Jivuka (black spirit) in an embodied form of the deity Doji: he takes the shape of a big feline, such as the tiger or the leopard. Due to the fact that those animals do not usually attack humans, each assault is interpreted as an attack by a wrathful deity: Jivuka took the shape of a tiger and assaulted the village[3].

Miglia is the spirit of the wind wandering in the hills and he appears as strong gusts or windy eddies: he is a benign entity and if he takes residence in the fireplace at home - almost like a puff, breath of life of the flame itself – he becomes the protector of the house.

The guardian deity of the boundaries, in this case the border between inhabited areas and the deep of the forest, is known as Ponku. This entity is understood as a double nature, since he can cause instant death and violent accidents to travelers but vice versa, in the form of Mioku, he guarantees the welfare of the villages. That's the reason why a special ceremony is celebrated in his honor every year .

The absolutely most feared spirit is Gandaui, who presides the crossroads. Apart from some different regional features, Gandaui embodies the concept of evil spirit prevalent in many traditions of Asia and of the Subcontinent, such as the Buddhist and Hindu tradition, and in popular folklore in general. This malignant entity embodies the psychic carcass of spirits in pain - the revenants - those who have suffered a violent death. Crossroads are therefore dangerous places because they are universally understood as sites of passage of *bhutas*, *pretas* and *pisacas*: ghosts, phantoms and other frightening demonic specters.

The boundaries of the world, that sort of non-place where day meet the night, is the territory of the deity Yachchu, who presides over the madness and related mental disorders. Similarly to the initiatory spirits of shamans, he seduces the victims by taking on the characteristics of the opposite sex and tormenting them during the sleep through dreamlike visions. There is a strong erotic component

[3] This is explained as a spirit possession where the controller is an ancestral spirit and the controlled body is a non-human animal (feline, a big cat as leopard, tiger etc.)

in the manifestation of this demon that can lead men and women to madness - which is interpreted as a real phenomenon of possession - if not properly placated by the shamans.

Finally, I mention three ancestors spirits regarded as protectors for excellence of Apatanis: Lokisaha, Kilokirun and Kirikiloui. The first is the spirit of an ancient *nyibu*, or shaman, of the clan Hibu who descends directly from Abo Tani. The second one is a forefather who embodies the power of *misi migu*, a name referred to the 'Gift of the Gods', i.e. the knowledge of the shamans; so he is a tutelary deity of all Apatani *nyibus*. In conclusion, the third one is a guardian spirit who presides over the proper conduct of the *kirikilo* ceremony - the funeral - the delicate moment of passage of the soul from the world of the living to world of the dead.

The funeral ceremony usually takes place a couple of days after death and is considered by the Apatanis the most important funerary ritual. The body is buried in a field belonging to the family: a pit is dug with a side bamboo-reinforced and South-oriented underground chamber. The body should be carefully laid down with its feet pointing southward, the direction towards which the journey to the afterlife is imagined to start.

The ritual requires the sacrificial killing of a *mithun*, a psychopomp animal that will guide the deceased towards the *Neli*, the place of the ancestors. As in Indian traditions the buffalo – the black-mantled mount of Yama, god of the Underworld - is in close relationship with the world of the dead, so here the *mithun* escorts the deceased towards the realm of the dead.

In a first preliminary phase, the body is composed as if the man was asleep. Around the deceased is placed a necklace made of bones. It is a kind of garland made with smoothed shinbones of the sacrificed *mithuns*. So each grain, each bead, represent a *mithun* sacrificed by the clan in the past, the skulls of which decorate the walls of the houses.

Before the burial the heavy necklace is removed from the body and after the addition a new bone of the sacrificial victim it will be inherited by the new chieftain. This sort of relic is of great importance in the ritual because it represents the entire lineage of the ancestors and at the same time confirms the bond between living and

dead.

In the Apatani language the term *yalo*, or *yagi yalo*, indicates the individual soul that in the *post-mortem* is preparing to make the long journey in the Underground. The *Neli* is a parallel dimension located under the earth where the dead are supposed to carry on their new life. The deceased is therefore in need of a number of items. The clan offers him food, alcohol, tobacco, clothes and everything might be considered useful in his new chthonic existence. This dark dimension develops below the surface of earth: similar to the earthly world this is imagined somehow specular and diametrically opposed along the horizontal axis, like the surface of a mirror that is a clear esoteric symbolism. When the Sun arises in one world, the Moon does the same in the other one and vice versa.

Those who die of a violent death (*vuiu* in Apatani) or the ones for whom it is not possible to celebrate a funeral are believed to stay for a period in this world or in the rarefied aerial dimension above it. They exist as ghosts. This dimension in Apatani language is called *Teli* and is a sort of atmospheric extension hanging above the surface of the earth which not accessible to the living.

However the ultimate destiny of the souls is to enter – sooner or later - the underworld dimension and become ancestors. If the world of the surface has a dimension hanging above it (*Teli*), in the strict conception of the Apatani's cosmos there must be its geometric correspondence in the Underground (*Neli*): in the atmosphere of the world of the dead there is a village imagined hanging upside down. This is known as *Pinulemba* or the village of *Pinus*, i.e. the primal spirits of every race and species of animals and plants born on the earth. Some of the *nyibus*, the shamans of the Apatani clans, claimed that the *Pinulemba* is a sort of village-forge, a kind of limbo where the souls of those who are not born yet dwell while waiting for taking shape.

In the cosmology of Apatanis, all of these dimensions are interrelated as overlapping layers on the *axis mundi,* which is clearly symbolized by the platform and the totem pole in the center of the village or other holy and significant places[4]. The idea of the

[4] The basis of the universe is imagined to be supported by the occipital vertebrae of a cosmic *mithun*.

existence of the individual soul seems to cross – both ascending and descending - these dimensions. I did not have the impression of the presence of religious concepts related to the idea of reincarnation or transmigration although the whole time of existence seems to gradually rarefy until the being is eventually reintegrated into the natural cycle. However, it is interesting the idea of beings migrating from the surface to the subsurface - and potentially vice versa - in a continuous exchange of offerings for the renewal of the pacts of alliance.

The Apatanis, as other agricultural tribal communities, believe in the existence of a substratum, thinner than the soul of the dead, which penetrates the ground thus making it fruitful for future generations (Fürer Heimendorf 1943: 174). The livings feed the dead with selected offerings (products of nature in general, but the *mithun*/buffalo is the donation *par excellence*) following a 'principle of mutual nourishment' (Osella and Osella 2003: 68-81; see also Berger 2010: 265; 2001: 35-49). The dead, if pleased, will ensure fertile lands and abundant crops. This dynamic of exchange is of the utmost importance since it sets the bases for understanding the role and the duties of every clan and its members towards other entities (Beggiora 129-30).

Particularly interesting is at this step - as well as during any particular ritual or ceremony of crucial importance for the social life of the village - a type of divination ceremony officiated by the shaman of the clan. It is a genuine form of magical haruspicy since favorable or nefarious auspices are drawn either by reading the liver of the sacrificed animals, usually chickens, or even by reading the yolk of the egg.

These are 'mechanical' techniques of divination (i.e. not including phenomena of trance), that in the West can only bring us back to the memory of classical studies: the haruspicy of Greeks and Latins.

Noteworthy is the fact that tribal communities survive where similar rituals still performed. Very interesting is the complex interpretation code of the sacrifice, given that not only the general appearance of the viscera should be taken into account, but also their color, their flavor, any abnormality and so on.

This type of rituals is practiced especially on the times of transition such as the birth of a child, but also on the death and 'rebirth' of the soul in the *post-mortem*. The complex rituals of haruspicy celebrated during the pregnancy are called *ago*. *Hiricantum* is the ritual that marks the third month of pregnancy: in a reeds basket offerings are donated to the spirits and therein anthropomorphic figures made of bamboo and woven straw are placed. This should ensure the proper formation of the fetus and protect him from the attack of evil influences. In the ninth month the ritual called *pilia* is finally celebrated: through the sacrifice of a chicken and the following haruspicy of its liver it is even possible to determine the sex of the child[5].

We refer to a concluding "scheme" for a full study of the interpretation of livers and eggs as a practice of divination that we have documented among Apatani shamans.

The widespread use of mechanical techniques of the ritual as a replacement for dynamics of trance and possession – a more typical feature of Himalayan shamanism - gave me the impression that the Apatani tradition is going towards a process of simplification. In fact in the Apatani Valley modernity - with all its contradictions - had a greater influence, especially if compared to what happened to other neighboring tribal groups. I remember an interesting detail during the funeral I attended. A particular construction also named '*yalo'* was placed obliquely on the burial pit. This is a ladder-shaped bamboo structure where the horizontal rungs are perforated so that they look like flutes. Someone among the people participating the ceremony was blowing them producing sounds and acute whistles. The elders of the villages said that they were the so called *mijis*, the youth of the clans aspiring to the knowledge of the language of the birds or the language of the 'others'. This seems a clear reference to an initiatory experience: so they were shamans aspiring to the secret knowledge of the language of the spirits. On the one hand it is interesting the quest for a 'sound', a particular vibration at a particular moment that is

[5] As discriminative of the sex of the unborn child the *nyibus* stated that 'Pinu' creates the males and the females with the *Tetsin Tarin* and the *Macu Tagiu*; these names should indicate, respectively, the male and female sexual organs.

universally considered auspicious since the communication routes with the supernatural are unfolding. On the other hand this gesture seems to be the willful attempt to recover a knowledge that is disappearing at a time of severe crisis of identity of the community as a whole.

Society in transition

Although the traditions of the Apatanis and of their neighboring groups bring us back to an archaic cultural baggage and to an ancient form of shamanism in which the man is imagined as living in harmony with the surrounding nature, it is nevertheless incongruous to idealize this reality. In the past and throughout the region frequent clashes between groups took place in an environment where the struggle for survival was a daily challenge. The Ahom period (1228-1826) in this regard is particularly interesting because it was then possible to establish an administrative framework able to hold together different ethnic groups on an essentially elastic cultural matrix. This point seems intriguing because, despite several legislative efforts, Britons were unable to apply it with the same effectiveness later.

In the tribal environment we can identify three stages of social transformation, i.e. migration, [cultural] adaptation strategies, negotiation of space (Bhagabati, 2009: 4). Bhagabati notes that the mobility of the hill tribes was no doubt originally inspired by the struggle for living spaces. As history - and the same cosmogonical memory of the clans – shows, these groups were constantly fighting each other, conflicts of feud took place, so that the Ahom themselves in many cases waived to collect taxes and paid rather bribes to the so-called *posa* in order to maintain the stability of the territories (Singh, 1995: 14). But migration and subsequent adaptation to new territories - a process potentially leading to modifications of both on names and identities - were possible under an essentially fluid social context, flexible enough to incorporate new immigrants.

The Brahmanical patronage of the institutions has favored over the centuries the filtering of Hindu cultural elements, particularly related to Shaktism, in the region. Something similar has happened with the historical presence of the Buddhist schools in the

western valleys in the areas of the ancient eastern pilgrimage routes to Lhasa. This syncretism has given rise to a composite cultural matrix in which the process of assimilation and enculturation has absorbed many elements from the lower strata. This happened thanks to the constant communication between the communities and the mutual acknowledgement of the ministers of religions (lamas, *pujaris*, shamans, oracles) on the basis of authority and charisma of each of them in its respective group.

So during my fieldwork not only I have found many similarities between the local tribal tradition and other continental indigenous cultures, but the tribal culture itself overlaps here the Hindu and Buddhist traditions of the place in a kind of twilight zone whose boundaries are not so sharp.

The shamanism here is not just a functionalist (local) way to explain the manifestations of the nature and the sacred awe that they inspire. The belief on the spirits of the forest actually combines the enculturation of indigenous myths and the strong and ubiquitous local symbols of tribal religion with ancestral ritual practices and elements of Eastern Shaktism, Tantrism, and Buddhism. In that, it does represent what Marcel Mauss would have called ‘a total social fact’ (Mauss 1966: 76-77).

This kind of micro-equilibrium could be threatened by the radicalization of social boundaries that took place as consequence of colonialism as well as some aspects of post-colonial policies.

The Britons managed in fact to carry to India the nationalistic process that had marked the history of old Europe. It was therefore necessary to map the nation, rationalize its population through a real computation of peoples, ethnic groups, castes, ranked according to 'racial' and religious criteria. In other words, a grid of rigid social classification was created where the society had previously a more variegated and protean nature.

For example the so-called Inner Line (1873) separating the area controlled by the Britons from that of the ‘excluded areas’, the wilderness inhabited predominantly by the tribes, was drawn in the Northeast. Before the Second World War the entire area and its resources were re-evaluated due to their strategic importance. After the Indian Independence (1947), new boundaries were marked. In

international politics, particularly significant were the events of the Partition of Bangladesh (1971) -which separated geographically the Northeast from the rest of the sub-continent - the Sino Indian War (1962), and the Tibetan issue. These events led to a militarization of many districts and the tension is still strong in the border areas. At the same time the social pressure exerted by the refugees and the migratory flow from Bangladesh and Tibet is not a resolved problem yet. In domestic policy the dynamics of national development had considerable difficulties in reaching the Northeast. The welfare policy for scheduled tribes has often led tribes and ethnic groups to compete against each other fighting for the right to the reservations quotas. The combination of all these elements - that here we can only briefly mention - caused the onset of many centrifugal forces in the actual processes of nation-building in India.

At the same time, the theory that ethnicity is mainly determined by within group and among groups (the outside world) relationships can be compared to the actual weight of transmitted real cultural contents (Barth, 1969: 9-37). In this sense, the tribal communities of India have experienced colonial isolationism. Conversely, after Independence, they have been forced towards economic development with a syncopated rhythm from area to area, and often without freedom to make choices. Although in the Northeast a gradual policy has taken place, there is a widespread perception that the specificities of each cultural identity were neglected in the general process of nation-building. Consequently those identities have been the pretext to the creation of the platforms of ethnicity. In other words, the communities once more flexible, conglomerating clusters of versatile nature, now become ethno-political blocks. That reviviscence originated socio-political programs: on the Apatani area and the neighboring tribes the phenomenon of Donyi-Poloism is of particular interest.

This is a new religion inspired to the tradition of Adi tribes of veneration of Sun and Moon (Donyi and Polo); proud of these origins, this movement claims the tribal identity of the Northeast preserving the local environment from brahmanization, and from Christian-Catholic, Buddhist or other kind of missionarism. As far as the Donyi Polo presents very strong socio-political dynamics and

proposes religious beliefs composing altogether a positivist and naturalist system, the problem is that it tends to deny all those religious practices and rituals that have always been characteristic of tribal tradition and are scientifically considered to be their signature. Features such as the sacrifice of animals, the consumption of alcohol or others fermented natural products, the dynamics of possession, the rituals of exorcism, everything that in the tribal tradition allowed the *pujari* of the village to communicate with the gods and the spirits of the forest becomes forbidden in this context.

In short this is a form of purged shamanism, theoretically elected as a philosophical system, an *adidharma*, that if on one side sees the contribution of intellectuals and local intelligentsia (mainly Adi), on the other it has lost the connection with the contents and dynamics of authentic local tribalism (Ering, 2004: 35-38; Dawar, 2004: 159-72).

Conclusion

I think it's safe to argue that the above described scenario among the Apatanis is a splendid paradigmatic case study of societies in transition, applicable to the processes of cultural change of many ethnic groups inhabiting the Himalayan dorsal and the jungles of India. The hallmarks of a magnificent culture which probably finds archaic similarities in all countries of the Indian subcontinent survive in the religiosity of the tribe. Nevertheless the rationalization of the ancient relationship of equilibrium between man and nature today can be uncomfortably experienced (Chaudhuri, 2008, 4-7). The fact that the representatives of the tribal religion (that I conventionally called shamanism) - the animism, the donyipoloism - reaffirm that their tradition is ‘different’ from that of other neighboring clans, villages or tribes - as if to indicate a tradition which is more or less *pure*, more or less *corrupted* - is a sign of discomfort. Processes of nation-building and the construction of new identities - trends which are greatly wavering between isolationism and modernization - are polluting the ancient equilibrium. The local practices of cult and the religion appear to be at a turning point of change, of simplification. Once the shaman was ‘chosen by the spirits’. The fact that the spirits of the mountains no longer appear to their initiates but rather vice

versa; the initiates are now blowing in the bamboo of the *yalo* to get in communication with them, as to recover ancient knowledge; all that means that something of this tradition is irretrievably lost. The mystery of shamanism, intended as a pre-religious phenomenon – a phenomenon that always keep the scholars busy yet unable to define it exhaustively - became the undifferentiated phenomenon of 'nationality-religion' theorized by the fathers of sociology like Durkheim (Paden, 2008: 31-47).

We are at what Max Weber called the disenchantment of the world (Gerth and Mills, 1946: 50-51), the end of the societies submitted to the modernization. The process of application and extension of scientific thought slowly suffocates from its root the spiritual breath that for millennia has inspired human beings and has supported their vision of the world.

In a nutshell, this scientific thought (which now takes the form of a forced development, social uniformity, control of resources, interests of multinationals – see Baral 2006: 3-5) on closer inspection is not going to change anything and did not lead to anything today, because no one believes that from this 'science' and this 'progress' can emerge a general consensus on the role and the meaning of human beings in the world. This apparatus, Weber concluded quoting Tolstoy, is meaningless because it gives no answer to the only important question for us: what should we do? How shall we live? ([*Science as a Vocation*], Gerth and Mills, 1946: 129-56). As an alternative - from that shamanism, from those cultures, we could draw still very much.

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In this scheme, I explain the traditional technique of divination through the reading of the livers and eggs, as I documented among the *nyibus* Apatani. The general appearance should be taken into account. The liver of the chicken consists of two delicate lobes, held together in the middle by a piece of membrane and some small tubing. For obtaining the answer must be considered the condition of the lobes and the line created by the junction (as shown in the scheme, this can lean slightly to the right or left). – (following page)

	Haruspicy – reading of the liver				
	Joined lobes - regular	*Disjointed Lobes*	*Secant line to the right*	*Secant line to the left*	*Reddish spots*
Birth	regular pregnancy, healthy fetus	potential complications (fetus/mother)	male	female	pregnancy complication (miscarriage)
Disease	curable, appropriate sacrifice, healing	incurable, uncertain healing	-	-	inappropriate sacrifice
Death	natural	preternatural or violent (*vuiu*)	-	-	Abnormal situation, danger
Post Mortem (After death)	peaceful departure, adequate funeral sacrifices	doubtful situation: interference of spirits in the ritual; soul still tied to the world of the living	imminent death of a member of the clan	danger not imminent	unfitting funeral sacrifice

	Divination with eggs

	Normal appearance (yellow inside and white outside)	*Abnormal appearance (red spots)*
Birth	regular pregnancy, healthy fetus	potential complications (fetus/mother)
Disease	curable, appropriate sacrifice, healing	incurable, uncertain healing
Death	Natural	preternatural or violent (*vuiu*)
Post Mortem	-	-

Apatani house

Apatani man and woman

The deceased and the bone-necklace

Mithun sacrifice

The *nyibu* extracts the liver froom the victim

The *nyibu* tastes the flavor of the liver

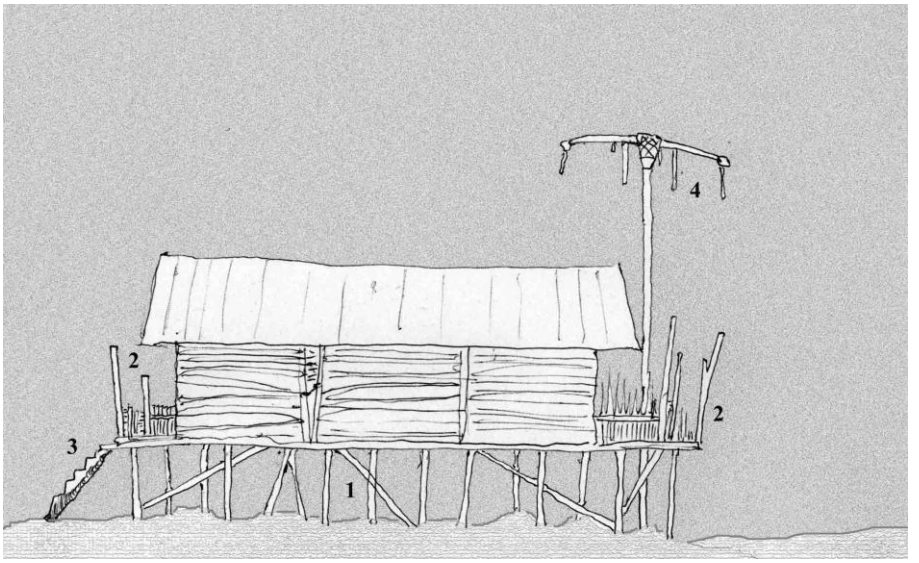
Closing the burial place with a bamboo fence

Udemik at the antrance of the village

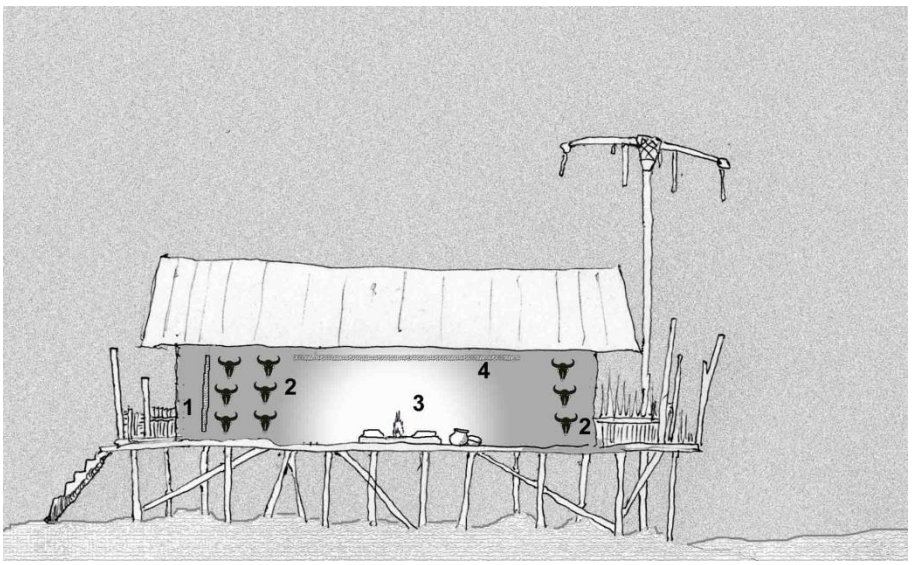
Hang village: totem poles and electricity

Boundaries of the village

House (outside) -1 Pilework, 2 Platforms, 3 Ladder, 4 Totem pole



House (inside) -1 Entry, 2 Rear Entry, 3 Fireplace, 4 Grid for hanging tools



-8-
Origin and History of Volga *Bulghārs*: A Study of the Journey from Central Asia to Volga-Ural Region and the Formation of Volga *Bulghāria*

Shahla Manzoor Baba

Abstract

Despite much research done on the study of Bulghārs, very less is known about the Eastern Bulghārs or the Volga Bulghārs. The Bulghārs, which we commonly come across in our studies, is mostly the name given to Western Bulghārs, who led to the formation of a country, still prevalent today, known as Bulgaria. On the other hand, the Islamic country established by Eastern Bulghārs known as Volga Bulghāria, perished to the withering might of Mongols in 13th century after its formation in the 10th century. This may be a reason of its being less known and relatively less exploited area. The present paper is an attempt to provide to its readers, the history of Volga Bulghārs right from the origin of their ancestors in Central Asia to the formation of Volga Bulghāria.

Along with some eminent sources, this paper utilizes the reference book namely "Tatar History and Civilisation", which is an outcome of the contribution of numerous specialized scholars and contains original articles of 35 expert contributors based on rare sources. This book is result of a jointly coordinated project by IRCICA, Istanbul and Institutes of Republic of Tatarstan.

Key Words: *Huns, Turkic Khāqānate, Great Bulghāria, Khazars, Volga Bulghārs.*

The *Bulghār* ethnonym derives from the Turkish word "*Bulgha*", which means to stir, mix, disturb or confuse (G W Bowersock, Peter Brown and Oleg Grabar 2000:354). The ancestors of Volga *Bulghārs* belonged to those Turkic tribes and clan unions of Central Asia, who migrated to west with Huns, in the second half of 4th century. In the middle of the

1st century, when the state of the Hunno in Mongolia disintegrated, some of the Hunno tribes submitted to China, and some moved westwards, to Central Asia and to the east of Caspian Sea. This epoch was characterized by the formation of the Turkic ethno-political unions. During the subsequent centuries, some Turkic tribes and unions of Central Asia went under the influence of Huns and got mixed with them. Here they for the first time got designated by the name of *Bulghārs* which means the "mixed ones".

Bulghārs, under the domination of Huns, migrated westwards to the European steppes, west of Volga River, in about 370 C.E (Carl Waldman and Catherine Mason, 2006:106). In this period, the Turkification of Eurasia intensified sharply, and the western advance (to Europe) of the nomadic groups and tribes of Central Asia began to reinforce this process (Iskander Izmailov 2010:37). Huns along with *Bulghārs* settled there and soon formation of a state took place. This state of the European Huns appeared in Pannonia. There they were helped by the *Bulghārs* in the consolidation of their state. Within no time, the Huns became stronger and after gaining real strength, they entered the frontiers of the Roman Empire in 375 C.E, defeating the Alans and Goths with a partial conquest of and a partial expulsion from the empire (Iskander Izmailov 2010:37). Attila the Hun, was the famous ruler of the Huns, who ascended the throne in 434 C.E. He was the leader of Hunnic Empire, which stretched from the Ural River to the Rhine River and from the Danube River to the Baltic Sea. On Attila's death in 452 C.E, Hunnic Empire crumbled and the state broke apart and the revolting nations defeated the Huns at the battle of Nedao in 454 C.E (Iskander Izmailov 2010:37). Attila's people, who were only a conglomeration of kindred tribes that he had welded together, divided again into these tribes; and each went its own way, One of these tribes was soon to be known as the *Bulghārs* (Steven Runciman 1930:5). Huns and *Bulghārs*, who are sometimes grouped together as Hunno-*Bulghārs*, along with some other elements in the population, settled north and east of the Black Sea in about 460 C.E, after the break-up of Hunnic Empire in 455 C.E (Carl Waldman and Catherine Mason, 2006:106).

After settling in Eastern Europe in present day Russia, the *Bulghārs* became known as a distinct people in Europe as the Huns were no

longer a major factor in the course of events. *Bulghārs* soon gained strength from the tribal unions and began to dominate in the Northern Black sea region. They soon became both a resource and consideration for the Byzantines of Eastern Roman Empire (Carl Waldman and Catherine Mason, 2006:106). Here they played an important part in political affairs of the region. Written evidence confirms that these events took place in 480 C.E, when the Byzantine Emperor Zenon appealed to the *Bulghārs* for help against the Ostrogoths (Iskander Izmailov 2010:38). In 481 C.E, the Byzantines recruited them as mercenaries to fight against the King Theodoric and his Ostrogoths. So by 482 C.E, some thirty years after Attila's death, *Bulghārs* are noted under their own name as the allies of Constantinople, fighting against the Theodoric and Ostrogoths (Steven Runciman 1930:5). This was an important testimony by Byzantium of the geographical significance of the *Bulghārs* and their domination over the black sea region steppes at the end of 5th and the beginning of the 6th century (Golden P. 1980).

However, amity with Byzantium was short-lived. The incident of being recruited by the byzantine, taught *Bulghārs* that the Union could be put to some use. By 489 C.E, the *Bulghārs* had initiated a series of raids on Byzantine Balkan possessions (G W Bowersock, Peter Brown and Oleg Grabar 2000:354). During the next few years they made several successful raids on the Balkans, in 493, 499, and 502. They also entered again into the career of the Great Theodoric and In 504 they were allied with the Gepids against him (Steven Runciman 1930:5). In 514 the rebel Vitalian employed *Bulghārs* to help him in his attempt against the Emperor Anastasius and in 535 they invaded Moesia; in 538 large numbers of *Bulghārs*, invaded the Balkans and succeeded in defeating and capturing various Imperial generals, including a baptized Hun called Acum (Steven Runciman 1930:6). *Bulghār* tribes at that time were composed of skilled, warlike horsemen governed by *Khans* (chiefs) and *Boyars* (nobles) (Encyclopedia Britannica 1992:346). However, this position of *Bulghārs* free will lasted slightly further to mid of 6th century. Shortly afterwards, they were overrun and subjugated by the Avars and then the Turks.

With the coming of the Avars in 558, the association of *Bulghārs* received a powerful blow and they lost their domination over the steppes. Some tribes got killed, some displaced and others absorbed

by them. However, the supremacy of the Avars did not lost long and in 568 they retreated to Pannonia in the face of attacks by the Turks, who had conquered the steppes of the Northern Caucasus (Iskander Izmailov 2010:38). The surviving *Bulghār* tribes were thus conquered by the Turks. The Turks, who apparently descended from the famed Huns, formed a powerful state, known in history as the Turk *Khāqānate* (Bukharaev Ravil 2000:61). Their state stretched from Lake Baykal and the Altay mountains to the Central Asia.

At its establishment, the Turkic *Khāqānate* (551-603) had an expansive territory reaching from Manchuria to the Northern Black sea and from upper Yenisei to the upper Amu Darya (Iskander Izmailov 2010:38). The Turkic *Khāqāns* became founders of the first European empire to have substantial influence on ethnic, political and cultural history of Central Asia and south-eastern Europe (Iskander Izmailov 2010:40). A complicated social system and rigid organization of power contributed to the stability of the nomadic empire of the Turks and preserved its unity. In general, the Turks made up the ruling social stratum that controlled all the other people of the steppes. Gradually, the *Khāqānate* lost its military power. The *Khāqānate* entered a stage of prolonged crises, the main reason for which was a struggle for power between noblemen of different tribal unions (Iskander Izmailov 2010:42). The *Khāqānate* finally broke into the Eastern *Khāqānate* (603-630) and the Western *Khāqānate* (583-657) (Iskander Izmailov 2010:38). The Eastern *Khāqānate* weakened by internecine strife, succumbed to T'ang in 630 C.E. and the Western *Khāqānate* itself splintering into rival fractions fell to T'ang in 657 (R. Khanam 2005:783).

During the period when the Turkic *Khāqānate* was weakened, *Bulghārs* created an ethno-political alliance of their own. *Bulghār* tribes who were living in the Black sea region and the Kuban steppes were united in 603 C.E, headed by Organa, who became the ruler of *Bulghārs* (Iskander Izmailov 2010:45). Here, they were again subjugated to the Avar *Khāqānate*. During the dark days of Avar rule it was *Khan* Kubrat, a prince of the house of Attila—whose family had some time acquired the surname of *Dulo* and had no doubt kept the headship of one of the many Hunno-*Bulghār* tribes of the Steppes that was able to supply the unifying force which rallied all the Huns and

Bulghārs (Steven Runciman 1930). In 619, Kubrat, having taken the government into his own hands, visited Constantinople to secure help against the Avars, against whom he had recently revolted (Steven Runciman 1930). At this time he was just a Hunnish chieftain. He secured Imperial help—the Emperor was only too grateful for allies against the Avars—at the price of baptism; and on his return he established, not only his independence, but also a supremacy over the neighboring tribes (Steven Runciman 1930:15). In 634-635 C.E *Khan* Kubrat, with the support of Byzantine, after destroying the authority of the Avar *Khāqānate* established a tribal union, in the vicinity of the Kuban river and the Azov sea, known in the history as "Great *Bulghār*ia" (Iskander Izmailov 2010:45).

Turkic *Khāqānate* united many different Turkic tribes, some of which, in the process of the disintegration of the *Khāqānate,* created their own states on the territories under their tribal control (Bukharaev Ravil 2000:62). After the fall of Turkic *Khāqānate*, there emerged two rival successor *Khāqānate*s in western Eurasia; The *Khazar* one, ruled by a dynasty of western Turk origin, with its centre near Northern slopes of the Caucasus, and the *Bulghār* one which in 635 C.E, under the leadership of *Khan* Kubrat and with byzantine encouragement, freed itself from Avar overlordship (R. Khanam 2005:783). The *Bulghār* alliance was particularly intensified under the reign of *Khan* Kubrat. He ruled the land lying round the lower Don and south to the Caucasus (Steven Runciman 1930:15). Kubrat, who inherited sufficient longevity from his *Dulo* ancestor, reigned upto 642 C.E.

After Kubrat's death in 642 C.E and with his son *Bat Bayan's* (*Bezmer's*) accession, the tribal alliance started to weaken because of the inner feuds and rising external pressures. Five brothers (Kubrat's sons), in a short time quarreled, as princes often do, and, dividing the inheritance between them (Steven Runciman 1930:3). Thus the kingdom broke up and the tribes were divided up between various princes of the house of *Dulo*. The reason was also the rising pressure from a new conquering Turkish race, the *Khazars*. *BulghārKhāqānate* soon came into conflict with the *KhazarKhāqānate,* successor to the Turkic *Khāqānate* in western Eurasia (G W Bowersock, Peter Brown and Oleg Grabar 2000:354). At present the *Khazars* were ruthless militant savages; and Great *Bulghār*ia lay in their path. *Bulghārs* were

attacked by *Khazars* continuously from 650s-660s and finally the *Bulghār* union broke up completely and got dispersed. The *Khazars* won the contest for paramountcy and emerged victorious from the contest. Though historically, Great *Bulghār*ia did not exist for a very long period, this was a time in which the population managed to form an ethno-political conscience; when the state fell apart and various *Bulghār* groups settled in different regions, they managed to preserve their ethnic names and typical cultural elements, evidently including their dynastic history even in their new motherlands (Iskander Izmailov 2010:45).

After the fall of Great *Bulghār*ia, Five sons of *Khan* Kubrat, each assuming power over a tribe or a horde, parted from one another, found themselves in scattered areas. The eldest of the *Bulghār* brothers, Bat Bayan, stayed at his post; his kingdom, depleted by terrified emigration, fell an easy prey to the *Khazars*, and he became their tributary (Steven Runciman 1930:17). The second brother, Kotrag, moved northwards, and lived on the farther bank. These two groups Under Bat Bayan and Kotrag, who stayed in the steppes of the Black sea region, are referred to as "Black *Bulghārs*" in Byzantine and Slav Chronicles (Iskander Izmailov 2010:45). One group under third brother Asperukh in 679 crossed the Danube into Moesia, and having subjugated the local Slavic confederation, there laid the foundation of the Balkan *Bulghār* State (G W Bowersock, Peter Brown and Oleg Grabar 2000:354). The land pleased Asperukh and his people and they remained there and there their descendants remain, even to this day. This State is known as Bulgaria.

The two other sons of Kubrat left for Pannonia to join the Avars. One of the *Bulghār* groups, headed by Kubrat's fourth son Kuwer, crossed the Carpathians and the Danube and migrated westwards into central Europe, where they merged with the Avars in Pannonia. Avar Empire had its main seat there and he became their vassal (Steven Runciman 1930:19). He played an important part in the policy of their *Khāqānate*. Another *Bulghār* group, headed by Altseko, the youngest son of Kubrat, intervened in the Struggle for the throne in Avaria and was forced to seek refuge. He escaped and wandered even farther, and ended his days in the Pentapolis of Ravenna (Italy) (Steven Runciman 1930:3). In the days of the Lombard King Grimoald (662-

671), he peaceably entered Italy and offered himself and his army to be the King's vassals. Grimoald sent them to Benevento, to his son Romoald, who assigned them three villages near his capital—Sepinum, Bovianum, and Isernia (Steven Runciman 1930:21). Thus the migrating group took up residence with German Lombards in Italy near Ravenna, to live as Byzantine subjects. They settled there, and 'to this day'—a century later—still partially spoke their old language.

Khazars, having completely defeated the *Bulghārs* by 680s, became the undisputed masters of North Caucasus (Golden P. 1980). The *Bulghār* groups under Bat Bayan and Kotrag finally fell under the influence of the *KhazarKhāqānate. Bulghārs* under Bat Bayan, at the end of 7th Century, tried to reach the region of interaction of the Volga and Kama rivers, but failed to overpower the local Finno-Ugric tribes (Bukharaev Ravil 2000:63). Thus they continued to play their part in the consolidation of *Khazar Khāqānate*. The second and this time successful attempt to penetrate the Volga-Ural region was under taken by the *Bulghār* group after the first great defeat of the *Khazars* by the Arabs in 736 (Bukharaev Ravil 2000:63). The horde migrated northwards from the *Khazars* and settled down in the middle Volga region. There they subjugated the Finnish aboriginal populations and founded a new state (E.J.Brill 1960:1305). Other than *Bulghārs*, among the immigrants there were many other tribes and families, of different origins. However, the predominant component among the immigrants to this region remained the Turkic *Bulghār* one. As the Finns mixed with *Bulghārs*, they slowly and gradually started to blend with them and finally became completely Turkicized, so much so, that the tribes living in the neighborhood of the *Bulghārs*, eventually became one tribe and one ethnicity (Bukharaev Ravil 2000:72). They subsequently became known as the Eastern *Bulghārs* or Volga *Bulghārs* (Carl Waldman and Catherine Mason, 2006:107). Their descendents remained for many generations to come, known to the world as the White *Bulghārs*. ('White' is synonym with 'Great') or even the Silver *Bulghārs* (an improvement on 'White') (Steven Runciman 1930:18)

Consequently *Bulghārs* settled in the north of Volga-Ural region, near the confluence of the Volga and Kama rivers. They colonized a large area around the middle Volga, creating a sophisticated trading community (David Nicolle 2005:47). They were

surrounded in this region, by the Turk-Ugrian population as well as Balto-Slavic tribes (Iskander Izmailov 2010:51). In the process of state formation during the 8th century, Turkic-Ugrian tribes were subjugated along with the partially expelled, partially conquered and culturally assimilated Balto-Slavic tribes (Iskander Izmailov 2010:52). The nature of the fabric of the *Bulghār* state ─ a tribal and ethnic conglomerate ─ was a source of grievous complications during the period of consolidation and centralization (Azade Ayse Rorlich 1986:11). The struggle for supremacy was fueled by tribal rivalries and some tribes submitted only reluctantly to the *Bulghār* rule (Azade Ayse Rorlich 1986:11). Whatever the feudal disagreements in the area may have been, both cultural traditions and the geopolitics of the region for the most part facilitated the rise of the Volga *Bulghārs* as one nation bound together by the drive for economic supremacy along the Volga and Kama rivers (Bukharaev Ravil 2000:85). The most important role in the process of establishing this economic dominance belonged to the ancient trade centre long situated in the interaction of the Volga and Kama, which was called *Agā-Bazār* (Bukharaev Ravil 2000:85). The *Bulghār* ethno-political alliance was headed by a ruler, who came from the *Dulo* "princely" family and brought with him nationhood traditions that formed a core for the consolidation of other tribes. The *Bulghārs* brought with them a fully developed political, social and military system (David Nicolle 2005:47).

In the early 9th century, *Khazars* again overpowered the *Bulghārs* and forced them into submission (Galina M. Yemelianova 2002:4). At that time *Khazars* were occupying the Lower southern part of Volga-Ural region. The *Bulghārs* lost to the *Khazars* their control over a substantial part of the north-south trade and began to pay tribute to the *Khāqān*. The chieftains of their tribes agreed to pay regular tribute of ermine, swords and sable skin to the *Khaqān* and to send members of their families as hostages to the *Khazar* court. The merchants from these tribes were subjugated to a tax of one-tenth of the value of the goods in favor of the *Khaqān*. In return the *Khazars* guaranteed them military protection against plunder by nomads (Galina M. Yemelianova 2002:4).

The *Bulghār* ruler bore, "*yiltawar*" as title (Sinor Denis 1990). The title indicates the status of a lesser prince, vassal of a Khaqān, in this

instance of *Khazar* Khaqān, and shows also that the *Bulghār* state originally formed only part of a greater empire and that their ruler was not entirely independent (E.J.Brill 1960:1305). Therefore, head of the state had no independent status and was only a vassal of the greater king of the vast *Khazar* Empire. He owned his allegiance to the latter while paying tribute realized usually in terms of 'Sable fur' from each household annually. The *Bulghārs* and other Turkic-Ugrian tribes of the Volga-Ural region were thus politically dependant on the *KhazarKhāqānate* in the 9th century and remained under the distant suzerainty of the *Khazars*. Nevertheless, although the *Bulghārs* weakened under the rule of the *Khazars*, the tendency to break free from their domination was growing (Iskander Izmailov 2010:52).

After the activation of the Volga-Baltic pass and the initiation of a regular caravan route to Khwarizm by the end of 9th century, the power of the *Bulghār* state increased. Trading activities and participation in world trade contributed not only to economic growth, but also to the military and political power of the new state, welding its ruling clans (Iskander Izmailov 2010:52). At the end of 9th and beginning of 10th century, the process of territorial, tribal and political consolidation of the people of the middle Volga region had been undergoing for more than a century, culminated in the emergence of a political entity founded by the descendants of Silver *Bulghārs* (Azade Ayse Rorlich 1986:10).

The *KhazarKhāqānate*, on the other hand, started to weaken towards the end of 9th century by internal wars and conflicts. The internal wars and conflicts inspired by religious matters took place as a result that the upper class of the *Khazars* embraced Judaism and forced the commoners to follow them. This step was a surprise to the Christian-Muslim environment around and Inside the *Khāqānate* itself. At the same time, *Khazars* were facing external threat from the Kieven State in the West, who after the arrival of Scandinavian Varangians, denied paying tribute to the *Khazars* and were growing in power and enmity with the *Khazars*. The *Khāqānate* received the hostile attacks from the Kiev princes in 965 and 968. The *Khāqānate* was ultimately defeated under the impact of Kieven prince Svaitoslav in 969. This ended the Bulghārs' vassalage to the *Khazar Khaqān* (Azade Ayse Rorlich 1986:12). Around 1050 to 1060, the *Khazar* state was finally

liquidated and the Volga *Bulghār* became influential in the lower Volga region (Iskander Izmailov 2010:47).

Early in the 10th century Volga *Bulghārs* became converts to Islam and with the weakening of the *Khazars* in the south of Volga-Ural region, towards the end of 10th century, they were able to give rise to a fully independent Islamic State. In time they acquired a certain civilization and their capital city, *Bulghār*, by the junction of the Volga and the Kama, became an important emporium, the centre of the trade of the Volga plain (Steven Runciman 1930:18). Eventually this became the act of international recognition of the Volga-*Bulghār*ia as an independent state and resulted into the emergence of the *Bulghārs* as a first Muslim society of Eastern Europe and Volga-Ural region. This society, with full justification, might be considered first Turkic state having all the components and potentials of a highly developed urban culture. Their state progressed and endured till the middle of the 13th century, when they ultimately fell before the withering might of the Mongols.

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