

An Archaeological Assessment of Taung Valley of Sindh-Kohistan Pakistan

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Abstract

The Taung valley of Sindh – Kohistan is very rich in archaeological depositions. The present paper is an attempt to take an account of 43 sites in the said region, influx variety of evidences have been traced from microlithism to Hakra, Amri and Indus type. It also reveals traces of nomadic camp, circular structure of stones. Grave yards and gobra bunds. Nonetheless Taung valley has big historical longitivity extending from ancient remains to medieval cemetery to pre modern nomadic activity and the most important structures witnessing local wisdom pertaining to water management.

Introduction

The Sindh Kohistan region located between the main hilly ranges of Baluchistan and the Indus alluvial plains is a scattered low-lying hilly area with gravelly soil some time covered with alluvial soil suitable for cultivation purposes and an alluvium rich valley. The main hilly sequences of Sindh Kohistan are Lakhi, Kambhu, Badhar, Bhit and Dumbar (Quddus, 1992:197). Within these ranges, there are several freshwater springs; rain feed rivulets (e.g. Gaj & Baran and others) and numerous passes wherefrom the people in retrospect have communicated. The concentration of ancient settlement is documented around Phusi pass in north and Darwat pass in South Sindh (Fairsevis, 1975: 211). The climate of the area is categorized as arid with scanty and unpredictable rainfall. Archaeological Investigation shows that human beings living there have learnt to utilize the rainwater efficiently and have established excellent water storage system known as “Gabar Bund”; where rainwater collected artificially for agriculture and other usage.

The Taung valley is situated within this region and was taken up for archaeological survey by the author. Prior to this survey, several archaeologists including N. G. Majumdar (1934), H. T. Lambrick (1941), Louis Flam (1981) and the Melbourne Team from Australia (1997/98) visited the region. Their research was limited and selective and focused only on (i) the mounded settlement, (ii) Gabarbands, and (iii) Graveyards. Other features, however, were completely ignored. This is the first time that all features of ancient human activity have been

intensively documented in a given region to understand and reconstruct general nature of the past culture.

During present survey, a total of 43 ancient remains were documented and after a preliminary examination of the data the remains were associated with Mesolithic, Hakra, Amri, Kot Diji and Indus period. The other remains like Nomadic Camps, Circular Structures, Gabarbands and Graveyards were observed commonly scattered all over the valley and some of them were recorded. The significant discoveries include Microlithic workshops, and Hakra phase settlements. The Cultural material collected from all the sites described in this paper is almost identical to the settlements from other parts of the Indus valley. The similarities not only indicate evidences of greater interaction network developing during these phases but also showed the cultural development and change within the given. The nomadic camps and some mysterious circular structures were also encountered. Several graveyards of historical value also registered. A distinguished and very famous ritual place known as Mula Ali War was also visited. Some major finds have been described in this paper.

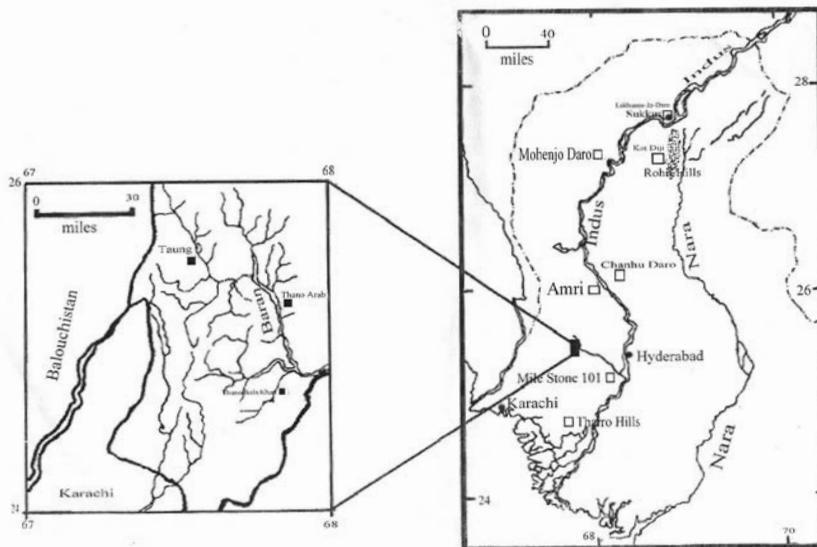


Fig. 1 Map of the research area located in Sindh province of Pakistan.

Geography of Taung Valley

The geography of Sindh-Kohistan region (Fig. 1) is diverse; and the hilly sequences with gravelly soils some time covered with alluvial soil are suitable for cultivation purposes. It contains smaller alluvial valleys, springs, and a network of rain-feed rivulets. As mentioned earlier the main hilly sequences include Lakhi, Kambhu, Bandak, Gaz, Bhit and Dumbar and their orientation is longitudinal in between the main hilly ranges of Baluchistan and the Indus alluvial plains. The major rain-feed rivulets are Baran, Gaj and several other smaller torrents.

Taung valley is located within this region, and more specifically is bordered with Bandak and lower extremes of Khirthar Range from east and Dumbar and Gaz ranges in the west

longitudinally (Fig. 1. Map). The Taung valley contains alluvial soil and small hills; a perennial spring provides water for limited agriculture and drinking purposes. Chains of small torrents from all significant ranges create mainstream called "Baran" that flow and water Taung valley and beyond. There are some water spots in the bed of Baran very useful for surrounding biosphere. The valleys and Baran Nai conjointly create very rich ecological niches where the basic subsistence resources including water, fertile soil, fauna and flora are available year round. A heavy concentration of both prehistoric sites and Gabar bunds is located along these two main rivulets.

Gabarbands

During the survey of the region, stonewalls built along slopes and in association with torrents were noticed. The function of these walls was to trap and/or collect water for various purposes such as terracing fields, making water tanks, diverting and chanelizing reservoirs (Piggott, 1950; Raikes, 1965; Fairservis, 1975; Lambrick, 1964; Usman, 1992:7) (Fig:2). Fairservis (1975: 171) mentions two types of water control systems- "The Kach system, by which alluvial soil was accumulated behind the steps of low dam laid across the drainage slope, and the reservoir dam". He further mentions two types of dams (a) to restrict the natural flow of the water and release it slowly into the fields and (b) a diversionary system, where the dams were placed as weirs to divert the waters into canal for cultivation.



Fig:2. Gabar band wall to divert flow of water.



Fig.3: A wall on the rivulet to close/restrict the flow of water.

The Gabarband system in Baluchistan has its beginning in the Chalcolithic Nal period. Based on the term "Gabar" historians have associated this system to the "Medieval Iranian Zartushtis who are also called Parsees" (Usman, 1992:7). These Zartushtis were fire worshippers and mainly depended upon agriculture besides herding. However, the discovery of prehistoric sites located in close vicinity help substantiate the primary notion of archaeologists regarding very early their origin in the area. This system is practiced even today in the area.

During the course of present survey, several stonewalls were noticed strategically built around the slopes and at points where water can be diverted and channelized into torrents that would further join the main stream that flows towards the alluvial valleys and beyond (Fig 3). In other words, the strategic hydraulic network was actually planned to collect all rainwater flowing through

smaller rivulets into mainstream for filling low-lying depressions for cultivation purposes in alluvial valleys. The low-lying depressions would retain water until the next monsoon season. During droughts, people would cluster around such perennial sources of water (Fig.4). This is a reason that majority of the permanent archaeological sites are situated near perennial springs while nomadic-herding camps are spread throughout the region. The socio-political aspects regarding these construction activities are not very clear. Whether it was a communal undertaking with equal shares for all or it was organized by an individual landlord for his own field as is practiced by the contemporary societies is difficult to understand.



Fig. 4 Small wall to divert the water towards slopes



Fig.5: Another wall to control the flow of water.

One of the Gabarband was located at 25, 51.00N- 67, 34. 05/14 E degree, near the Khirthar range. The existing wall measures 28 x 05 x 02 meters along the western side while along the eastern side it measures 18.30 x 5.80 x 4 meters. This side is provided with an extra support of two other walls. In its general scheme, the stone slab wall was erected and filled with soil and gravels. A rivulet flowing through seems to have destroyed its eastern portion (Fig. 3).

Another Gabarband located at 25, 49.25N - 67, 31.55E degree is a stone-wall strategically built to collect the water or divert its flow towards the mainstream. A total of three walls are visible in sequence oriented towards the vast valley in between Gaz and Khirthar (Fig. 5).

Microlithic Workshops

The microlithic tradition is important in understanding the evolution of civilization as it appears in most parts of the Indus Valley and beyond. The present discovery is an addition to the already existing data from the Thar (Nilofer *et. al.*, 2002-03 & Mallah, 2005), Coastal regions (Biagi, 2003-04) and various parts of India (Shinde, 2007 pers. comm).

At least 8 sites were encountered where Microlithic tool manufacturing debris lay scattered on the surface. These sites fall in two categories (a) workshop with heavy concentration of artifacts and (b) surface scatter, both located on the top-flat surface of low-lying foothills with a rivulet flowing towards the open valley. On the surface, a small heap of stone blocks

was observed with artifacts scattered around it (Fig.6), which, included complete nodules of chert as raw material, prepared cores, primary and secondary flaking debris and blades.



Fig.6: Heap of stone where artifacts are scattered

The raw material used include black chert and brown or dark brown chert. The prepared cores artifact? are small measuring less than four centimeters in length and less than three centimeters in thickness (Table 3a) and are suited for pressure flaking techniques of micro tool production. The tool type includes variety of cores, blade flakes, points and borers (Fig. 7&8). The raw material nodule were checked for the quality before transporting as many nodule are partially flaked? (Fig. 9) A thin concentration of pottery was also observed.



Fig.7: Artifacts collected from the workshops

The Lohi Waro Bhuthi chert stone surface scatter is located to the north of Taung village at 25, 48.30N - 67, 34.18 E degree. The site is located on top of the hill where the Baran Nai flows through the northern side while the site is accessible only from the southern side. In several areas along this rain fed stream, water is available throughout the year and even during the summer in deep ditches. Two lime stone heaps were noticed and one of them was circular in shape with a scatter of debitage indicating a probable stone flaking workshop around these features. This site can probably be identified as a Mesolithic habitation?



Fig.8: Artifacts collected from the workshops

Another workshop was documented at 25, 47.07N- 67, 32, 28 E degree with a good quantity of cultural material like cores, flakes, blades etc of the black and brown chert variety. Here a cluster of five workshops was recorded though the western workshop was badly vandalized.

On the top flat surface of a hill, at 25, 47.07N- 67, 32.26E a small depression was noticed with chipping debris in its close vicinity which include flakes and cores. Whether it is an artificial depression created to collect rainwater, or a quarry for chert similar to the Rohri hills is not clear and is available for future research.

Similar workshops were also located at 25, 47.19N- 67, 32.11 E degree with few burnt limestone chunks? at 25, 47.12N- 67, 32.17 E and 25, 47.03N- 67, 32.29E degrees. In several localities such as at 25,52.09 N- 67, 28.28/2913 degrees, Mesolithic chert stone flakes are sporadically scattered indicating a temporary camp and incidental workshops.



Fig.9: Partially flaked nodules collected from the workshops

Hakra Period

The Hakra assemblage is recently emerging as a distinct phase based on the ceramic assemblage and is categorized as one of the nascent phases of the early Indus period and can be traced in both great traditions of Indus Civilization i.e. Baluchistan tradition and Indus tradition (Shafer, 1991 and Kenoyer, 1991). The available evidence of Hakra assemblage during the early Indus tradition indicates the beginning of a new era in the evolution of the civilization. Two distinct aspects, the sedentary and the pastoral nomadic lifestyle seem to

have emerged and prevailed in its local/regional character. The sedentary aspect of Indus tradition Hakra can be seen in the Ravi phase in Punjab Plains (Kenoyer and Meadow; 2000), in Cholistan (Mughal, 1997) in Gomal Plain at Sheri Khan Tarakai (Khan *et.al*, 2000), in southwestern Sindh at Amri and Balakot (Casal, 1964 and Dales?) and on the Indian side in Haryana, and Rajasthan (Shinde 2007 personal comm.). The Pastoral nomadic lifestyle is greatly found in Thar Desert region (Mallah, 2000; 2002; 2005 and 2007). In this phenomenon, most importantly, the settlements located close to the bordering area of Sindh-Kohistan may carry the elements from both traditions i.e. Baluchistan and Indus tradition related to the beginning of new phase referred as “Hakra”. The smaller sites like Miri Taung II and III located within the bordering regions like Sindh-Kohistan may also carry the character of both great traditions.

In the cultural assemblage, pottery is the most diagnostic and widely spread cultural element for recognition. The pottery is generally handmade, coarse with simple painted incised wavy decorations or cord impressed motifs. A major sedentary cluster was recorded in Cholistan where 99 sites have been recorded (Mughal 1997). During the Ravi phase at Harappa, the profusely decorated pottery along with several other artifacts are reported (Kenoyer and Meadow, 2000) and Kenoyer (2005) mentions “the Ravi phase pottery is quite distinct from pottery found at sites to the southwest such as Mehrgarh, but it has some similarities to pottery found at sites in the Suleiman range to the west, and many more similarities to pottery in the Ghaggar-Hakra river valley region to the east”. The Ravi pottery is refined, mass produced on the wheel and more elaborately decorated sometimes with graffiti in comparison to other Hakra/Ravi sites perhaps represent a fully developed phase of the sedentary village culture in various part of the Indus valley. At present, the best picture on the origin and development of the culture and society of this phase comes from Harappa where during period IB of Ravi Phase, the village extended over 10 hectares and was already divided into two parts. Various exotic commodities, like shell, semi-precious stone were brought in for making beads and bangles indicating interaction networks and commercial exchange-basis were exercised. The nomads did not however, manage to use the variety of

cultural artifacts available except pottery and stone tools.

During the survey of Taung Valley, handmade potsherds resembling the Hakra ware were collected from at least three sites. The pottery was collected from the surface and from the vandal's trench at Miri Taung II & III. The pottery is coarse, handmade, painted and plain containing many pottery bits in the body wall



Fig.10: Plain and Painted pottery

section (Fig.10). The painted motifs include horizontal bands, floral patters with vertical thin strokes. At these sites Amrian and Kot Dijian pottery was also present.

Miri Taung-II (Phung Jabal) 25, 46.42N- 67, 33.25E degree, located on the southwestern side of the modern village of Taung is a permanent settlement occupying the western side of a hill top. The site is badly destroyed by the locals for the soil and their digging tools were noticed in one of the trenches during the survey (fig. 11). The pottery and artifacts were noticed in the section of trenches opened by the locals. The handmade plain and painted pottery was collected from the lowest levels of the deposit.



Fig.11: Vandals digging tools in the trench & the section shows cultural deposition.

Another site Miri Taung- III 25, 45.98N - 67, 33.54 E degree located to the west of Jam Lohar graveyard is also vandalized destroying the cultural context of the archaeological deposit. However some pottery was collected from the surface for research purposes.

The Indus period remains were collected from Miri Taung-I and Thikar Nath. Miri Taung has previously been reported by Flam (1981), Lambrick (1975) and Majumdar(1934). and The other significant sites within vicinity of this settlement are Koh Tarash and Phung in the Koh Tarash Valley located on the eastern side of Khirthar Range.

Thikar Nath 25, 47.15 N and 67, 33.26 E degrees located just north of Binshi Waro Muquam has a thin scatter of archaeological material. No prominent feature was observed except some ashy spots in the gullies which can provide good carbon 14 sample for accurate chronology of this particular settlement. The archaeological material collected includes, plain and painted pottery, terracotta and stone discs and chert blades. A later occupation is suggested by the presence of glass and glazed pottery.

Miri Taung-I 25, 46.39 N and 67, 33.11 E degrees located on a hill with evidence of prehistoric occupation is northwestern of the modern village of Taung (Fig.12). The survey revealed three phases of occupation at the site. Here the cultural material is scattered all around the hill and various areas have been destroyed and disturbed by digging trenches probably for collecting the rich habitation soil. Within the section wall of these trenches cultural deposits are marked with ashy and charcoal layers which would provide good dating material. The architectural evidence includes a platform measuring 23.50 x 16 meters enclosed within a wall. The cultural material collected Miri Taung-I include painted pottery,

broken pieces of marine shell bangles, terracotta cakes and bangles, and parallel sided chert blades (Fig. 13). During our survey, three phases of site occupation were observed. From the western side at 100 meters distance, one-meter high mounds covered with cultural material were observed which suggested extension of the settlement.



Fig.12: General view of the Miri Taung-I.



Fig.13: Cultural material collected from Miri Taung-I site.

Nomadic Camps



Fig. 14: General view of the Pastoral camps

South Asia is a diverse region where several cultural trends prevail and pastoral nomadic life pattern is one of them with deep roots in the prehistoric past that continues till date. A large majority of the population are still wandering herders favouring the foothills, piedmont deserts and the areas with abundant pasture and water (Fig. 14). In the Archaeological context this nomadic lifestyle has not been given its due importance and hence the survey emphasizes this aspect of the past cultural phenomena.

While analyzing the contemporary nomads, it is found that goats, sheep and cattle are

avored animals for pastoral purposes. Since these people are constantly on the move, they avoid constructing any permanent structures or carrying heavy loads. They move with the basic and necessary material for daily use, food and shelter which includes wooden sticks in concave or arch shape, enough to build a frame for their temporary huts, which is then covered with either cloth or grass/thatches available in the immediate vicinity. Some groups do not carry the hut construction material and use branches of tree preferably the Khabar *Salvadora oleoides* for this purpose (Fig 15). Selection of the area for their temporary halt depends upon two essential factors (a) available pasture and (b) water. Hypothetically, the diversity of resources in an occupational niche would invite a dense occupation of the nomads. The traces of habitation or occupation left behind include remnants of hearths used for cooking in form of ashy patches, few broken objects and pottery litter and stone boulders arranged in circular / or semi-circular shape in case of a hilly region. The size of the occupation would depend upon the size of population on the move.



Fig. 15: An abandoned pastoral camp.

These meager occupations are archaeologically neglected and forgotten during the course of research and hence this aspect of the past society in the Indus valley is unclear even though the evidence is still intact within the deserts and hills of the region. During the survey in Taung Valley, traces of nomadic occupation are documented on the top flat surface of the foothills, at the base of small hills, near the torrents and trade routes. The

archaeological data includes small blocks of limestone scattered over the surface, pottery and ashy patches. The limestone blocks are lined up in semi-circular shape to form a hearth for cooking purposes (Fig.16) and these are the best indicator of the number of families on the move. A close examination and documentation of these hearths by collecting carbon sample might reveal the date of occupation of a given settlement.



Fig. 16: Limestone blocks lined up in semi-circular shape for a hearth.

Surface scatter of cultural debris was noticed on the at northern side of Taung village 25,46.93 N - 67, 33.85 E degree. The site is littered with pottery chert tools, which have been collected for study. This is a herder's camp located near the perennial water spring.

Another site, 25, 37. 60/62 N - 67, 36.43 E degree near Badar Waro Dhoro on the western side of the track route towards Binir is located along a rivulet with a scatter of some limestone and potsherds and ashy spots suggesting cooking areas.

Another large area with the a surface scatter of pottery was identified at a site named Shah Mohammad Chutto 25, 48.85 - 90N 67, 27.75-77E degree; The other cultural material includes scattered blocks of limestone, a hearth 25, 48.90N- 67, 27.75 E degree and an arrowhead made of stone of copper.

Mysterious Circular Structures

Another frequently reoccurring feature during the survey was circular structures of two types (a) single stone ring made over the ground with a stone slab placed at center (b) a circular walled structure with an entrance on the eastern side (Fig. 17). Some have later Muslim graves around with structures built on them.

Similar archaeological remains are reported from Baluchistan for instance at Edith Shahr in Las Bela (Fairservis, 1974: 362-386). The circles found at Las Bela and Makran are however larger in size with a single or double alignment of stones. Scholars have not found any satisfactory explanation for these remains and have correlated them with death rituals. Fairservis has given dates between 1400 BC to 1800 AD (Fairservis, 1974: 399-414). Hence there is no concrete answer to the purpose or date of these structures.

The circular structures documented in the Taung valley are made of stone blocks, and are located along the routes connecting two villages. One such feature located at 25, 49.03N - and 67, 32.34E degree was disturbed and at the bottom of the trench was an ashy layer with bones and soil, suggesting a fire-related activity.



Fig.17: General view of one of the circular structures

Four similar structures were documented northeast of Chutta village 25, 49.45N- 67, 28.03E degree on the route towards Nabil Gabol . One of these The structures is built on a small hill and interestingly shows the use of round stone blocks measuring 45 x 45 x 25 cm. The top of the structure was open and was filled with earth. A thin scatter of pottery was also noticed along with evidence of nomadic activity.

One such structure is located on the right side of the track to Duriji near Gaz 25, 46.83N 67, 31.32E degree. It is a circular stone structure measuring 9.10 x 9.00 meter, with an opening on the eastern side and the thickness of the stone wall measures 1.60-70 cm. The interior is filled with alluvial soil and on the southern side are located a few disturbed graves.

Similar round structure were also documented at 25, 48.41N - 67, .32.45 E degrees and 25, 49.03N- 67, 32.34 E degrees. One of them measures 10 x 10 meters while the other is badly disturbed with the stone blocks scattered around the structure.

Also during the survey single row stone rings spread over the ground surface were observed quite commonly and were found to be associated with modern rituals (Fig. 18). These rings are also located along the routes connecting two villages and are associated with wedding ritual of the local Chutta caste groups. Since the villages in the Kohistan region are distant from each other, after wedding ceremony, on their way back to the grooms village, these token rings are made as places for temporary halt. The newly wedded couple sits on the stone slab within the ring and the accompanying party dance and enjoy the joyous occasion within the circle. Two to three such rings are made before the arrival at groom's house and these structures are generally not disturbed as they are associated with marriage rituals. One such structure made of small pebbles was documented along the Taung - Duriji track, while another was noticed at 25, 46.18N - 67, 29.25E degree, measuring 9 x 9 meter.

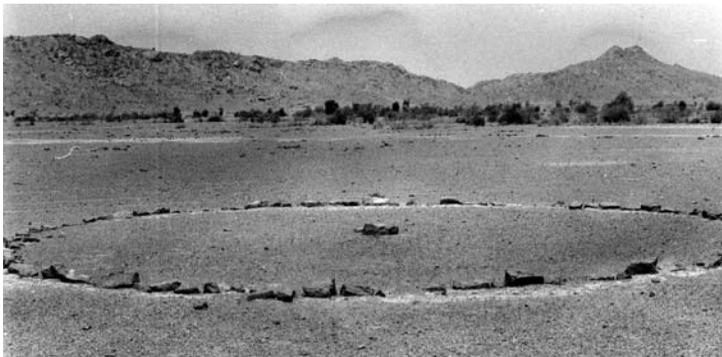


Fig.18: single row round wedding rings with stone block at the center

Medieval Graveyards

The beautifully carved and distinguished medieval graveyards of Sindh such as the Makli Hills at Thatta, Chukhundi, near Karachi (Lashari, 1993) and Satyoon jo Asthan in Sukkur Sindh (Mallah, 1994) are not just burial places but hold a particular importance in understanding the socio-political aspects of the society. The style and tradition of such stone carvings have similarities in the Indian tradition and the craftsmen and artisan can be traced to Ajmeer, Gujarat and Cutch (Lashri, 1995). The male and female graves are differentiated using various symbols like the turban for a male and jewellery for female; the status can be identified on the basis of the elaborate carvings for e.g., the grave of a tribal chief or a great warrior is embellished with depictions of him riding on a horse, holding a shield and sword in hand, arrows and bow on the back along with several soldiers on foot carrying various weapons while a common mans grave will have simple carvings.

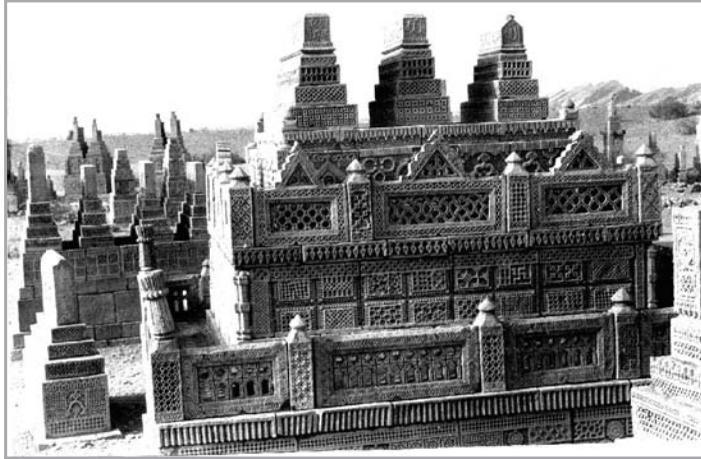


Fig. 19: Jam Lohar graveyard.

During the present survey at least 8 graveyards were documented some of them remarkably embellished with carved stones; for instance, the graveyard of Jam Lohar 25,46.03N - 67 33.37 E degrees (Fig.19). The graveyard of Jam Lohar located half-kilometer from the modern village Taung at. The graveyard consists of several clusters of graves, two among them on the northern and southern sides are enclosed within stone fortress, while the others are scattered over the vast area. The most interesting aspect is the geometrical stone carvings (Fig 19 & 20) including types of jewellery, weapons, war scenes on one hand and the typical symbols like the turban, charpoy, pillars of charpoy etc emphasizing the skill of the artisans.

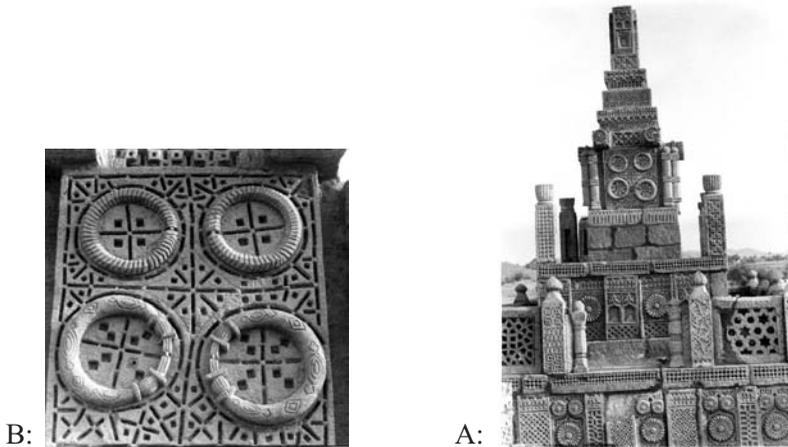
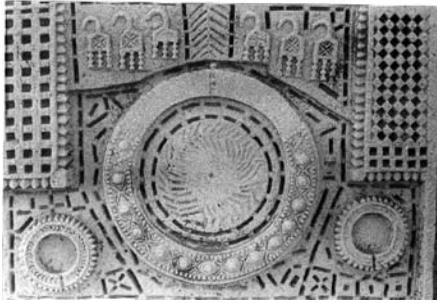


Fig 20: Skillfully carved women grave (B) with jewellery (A).



A:

Fig. 21: A: Different type of jewellery



B:

B: Sword with shield.

The female graves are symbolized with jewellery such as earrings, necklaces, bracelets, and *Bolo* (nose ring) (Fig 20 A & B; Fig 21: A), while the graves of a man are symbolized with turban, weapons like sword, arrowhead/spear, shields etc. and or war scenes emphasizing his superior status (Fig 21:B), in some instances the peacock and snake are also depicted. Majority of the graves are constructed by providing multiple platforms built one above the other, with the symbolic charpoy (coffin) and coffin bearers symbolizing the funeral rituals. The graves are decorated with geometrical patterns, sun disk and lotus flower, is embellished repeatedly. Importance to the name of the deceased and the Quranic verses is less important on the male graves as only two graves were embossed with the name of the deceased and the phrase "Yaa Allah". However, the graves of women were embellished with Quranic verses and the name of Allah. A study of the geometrical motifs, floral designs, turban, weapons and small pillar (as in Charpoy), figures of coffin can provide the chronology and evolution of this magnificent graveyard.

Binshi Waro Muquam 25, 47.02 N and 67, 33.47 E degrees located half a kilometer north of the modern village of Taung has graves similar to that of Jam Lohar mentioned above. According to the local tradition a war was fought between two tribes at this place and the soldiers from the Lahar tribe were buried on this spot where as the upper sections of the tribe including the family members of the chiefs were buried in the royal cemetery at Jam Lohar Sahib cemetery.

Another historically reputed cemetery is located at 25, 50.31 N- 67, 33.58/59 E degrees with the Khirthar ranges on the east and the Dumbar range on the west. There are a total of 20 graves in this cemetery but are badly dilapidated with the stone slabs scattered in the area, here and there. Most of the grave stones are plain while some have like the sun and lotus symbols.

The Muquam Hussain Shah graveyard 25, 36.59 N- 67, 36.11 E degree located on the right side just 8-10 meters from the road towards Binir also is mostly destroyed. The modern village of Haji Nabi Bux is located in the South direction.

A very sacred and popular spot was the Mula Ali War, one and half kilometer south of Shah Mohammad Chutta village at 25, 48.10 N and 67, 27.38E degree. Here a big limestone boulder is broken into four equal parts. According to the local tradition this rock is associated with the divine force of Hazrat Ali the most powerful person ever created by God (Sher-e-Khuda). A symbolic mosque has been built here along with a staircase that reaches the rock to feel its magic force/power.

Summary

The archaeological survey conducted in the Taung region has revealed at least 43 ancient remain. and can be divided into five distinct categories, (a) prehistoric sites spanning from the Mesolithic to Harappan (b) medieval cemeteries (c) unidentified structures probably modern and pre-modern associated with religion and local beliefs and cults (d) remains of past and modern nomadic movements(e) structures related to water management.

The significant discoveries include Mesolithic tool workshops where imported chert nodules were worked to make microlithic tools since both the complete nodules and flaking debris have been found at the site. Like blades, flakes, and other pointed and retouched implements. The chert used was imported Black chert was brought from Baluchistan and gray/brown chert was either transported from the Rohri Hills or from the nearest source at Mile Stone 101 near Hyderabad, Tharro Hills, Jherruck near Thatta (Allchin et al 1978; Fairservis, 1975). The discovery of Microlithic habitation and workshop sites in the region using imported raw material suggest the presence of an interaction system between the various existing communities. The discovery of these microlithic workshops in the Taung Valley will further help in understating similar correlated in discoveries in Coastal regions around Karachi, Thar desert, Mehargarh, Sanghao cave and several sites in Rajasthan India.

The findings of Hakra pottery dated to 3300 - 2800 BCE beneath the Amri and Kot Diji layers Phase pottery at Miri Taung-II & III sites justifies the spread of pottery traditions throughout the Indus Valley and has attested the relationships between highland and lowland communities even before the rise of early urban centers in the Kot Diji phase.

The hydraulic strategy or the water management system adopted by the locals in this region during the pre-modern time is also very interesting as it would have created availability of water through out the year even in arid and semiarid conditions. A network of stone walls was built at strategic points to strategically maneuver the flow of monsoon rivulets into the mainstream and was used to flood the alluvial valley. Consequently an agricultural system based on, Barani (rain fed) crops were possible and also the water could be stored in several spots within the bed of Nai for consumption through out the year. Though it is very difficult to date these Gabarbands and the stone walls they belong to the pre-modern times probably even to the prehistoric Harappan civilization as water management systems was a common practice utilized by them for survival in the arid zone. This ancient system has partially been renewed by the local people and it provides excellent basis for collection of rainwater; the small dams and the prehistoric Gabar bands are rejuvenated where enough water is stored that greatly fulfill need of local people during long years of the drought.

Nevertheless, this survey of Taung valley in Sindh- Kohistan region suggests that there is further need of scientific survey for Paleolithic remains and more Hakra period sites to understand the origin and growth of fully sedentary village communities and their relations with the regions specifically in Highland of Baluchistan and Indus valley lowland regions and role in the rise of incipient urbanism of Indus Valley civilization

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Table 1. List of Archaeological Sites

Site No.	Location	Description
1	25, 48.30N - 67, 34.18E	Chert Stone Surface Scatter
2	25, 46.94N - 67, 32.52E	Microlithic Workshop
3	25, 47.07N - 67, 32.36E	Chert Stone Surface Scatter
4	25, 47.07N - 67, 32.38E	Microlithic Workshop
5	25, 47.07N - 67, 32.26E	Microlithic Workshop
6	25, 47.19N - 67, 32.11E	Microlithic Workshop
7	25, 47.12N - 67, 32.17E	Microlithic Workshop
8	25, 47.03N - 67, 32.29E	Microlithic Workshop
9	25, 52.09N - 67, 28.28/29E	Chert Stone Surface Scatter
10	25, 46.42N - 67, 33.25E	Miri Taung II
11	25, 45.98N - 67, 33.54E	Miri Taung II
12	25, 47.15N - 67, 33.26E	Thikar Nath
13	25, 46.39N - 67, 33.11E	Miri Taung I
14	25, 46.93N - 67, 33.85E	Surface Scatter
15	25, 37.60/62N - 67, 36.43E	Surface Scatter
16	25, 48.85/90N - 67, 27.75/77E	Surface Scatter
17	25, 49.45N - 67, 28.03E	Circular Structure
18	25, 46.83N - 67, 31.32E	Circular Structure
19	25, 46.18N - 67, 29.25E	Circular Structure
20	25, 48.41N - 67, 32.45E	Circular Structure
21	25, 49.03N - 67, 32.34E	Circular Structure
22	25, 51.00N - 67, 34.05E	Gabarband
23	25, 49.25N - 67, 31.55E	Gabarband
24	25, 46.03N - 67, 33.37E	Graveyard
25	25, 47.02N - 67, 33.47E	Graveyard
26	25, 36.59N - 67, 36.11E	Graveyard
27	25, 32.15N - 67, 37.35E	Graveyard
28	25, 50.31N - 67, 33.58/59E	Graveyard
29	25, 48.11N - 67, 32.44E	Graveyard
30	25, 48.10N - 67, 27.38E	Mula Ali War

Table 2. List of Other Remains Documented in Taung Area

Site No.	Location	Description
31	25, 43.22N - 67, 37.60E	A 50 m. long stonewall located above the beginning point of a rivulet - Gabarbund
32	25, 43.22N - 67, 39.60E	Stonewall and a graveyard
33	25, 50.41N - 67, 31.30E	Wedding ring and nomadic remains
34	25, 52.37N - 67, 30.36E	Wedding ring
35	25, 55.02N - 67, 30.49E	Graveyard
36	25, 53.07N - 67, 31.54E	Graveyard - The graves contain similar decoration as Jam Lohar
37	25, 51.40N - 67, 33.12E	Stonewall - Gabarbund
38	25, 51.26N - 67, 33.37E	Stonewall - Gabarbund
39	25, 46.47N - 67, 31.31E	Pesh plant grown rivulet
40	25, 49.00N - 67, 28.44E	Stonewall - Gabarbund
41	25, 50.48N - 67, 28.21E	Stonewall - Gabarbund
42	25, 52.33N - 67, 29.05E	Circular Structure
43	25, 52.42N - 67, 30.31E	Stonewall badly destroyed, pottery is scattered around

Table 3a. Catalogue of Chert Stone Objects

Site No.	Location	Artifact Type	Length (cm)	Width (cm)	Thickness (cm)
1	25, 48.30N - 67, 34.18E	Core Flake	3.2	2.8	1.8
		Core Flake	2.7	2.4	1.8
		Flake	4.0	2.1	0.7
		Flake	3.2	3.2	0.7
		Blade	3.8	1.8	0.5
		Blade	3.4	1.0	0.2
		Blade	2.9	1.5	0.4
		Blade	1.7	1.0	0.2
		Blade	1.4	1.0	0.2
		Retouched Flake	3.4	1.0	0.8
		Retouched Flake	2.9	1.5	0.5
2	25, 46.94N - 67, 32.52E	Core	3.9	3.2	1.9
		Core	3.7	2.7	1.5
		Core	3.7	2.7	1.6
		Core	3.3	2.5	2.3
		Flake	4.5	2.6	1.1
		Flake	3.4	2.2	0.8
		Flake	3.2	2.1	0.7
		Blade	3.7	0.9	0.2
		Blade	2.1	0.9	0.2
		Blade	2.1	0.8	0.2
		Blade	1.2	1.0	0.2
3	25, 47.07N - 67, 32.36E	Flake	4.3	2.1	0.6
		Flake	3.9	2.3	1.2
		Flake	2.4	1.7	0.9
		Flake	2.9	1.8	0.6
4	25, 47.07N - 67, 32.38E	Nodule	4.8	4.6	2.6
		Core	2.8	2.6	2.2
		Core	2.7	2.8	2.5
		Blade	3.0	1.7	1.3
		Blade	4.5	0.8	0.4
		Blade	2.5	1.0	0.2
		Blade	2.7	1.1	0.4
		Retouched Flake	2.3	0.8	0.2
		Retouched Flake	3.2	0.9	0.3
		Drill	2.1	0.6	0.2
Drill	2.1	0.4	0.2		
5	25, 52.09N - 67, 28.28/29E	Core Flake	2.5	1.9	1.4
		Flake	3.1	2.6	0.8
		Blade	2.6	1.6	0.4

Table 3b. Catalogue of Pottery Artifacts

Site No.	Location	Object No.	Description
12	25, 47.15N - 67, 33.26E	1	Thick rim neck sherd of large jar perhaps with black line around neck
		17	Rim body sherd with black band around neck
		28	Broken piece of plate of dish-on-stand with two incised lines and nail impressions
		29	Body sherd - hand made and plain
		46	Terracotta Bangle
		26	Thin body sherd with square design on red slip
		7	Thin rim body sherd of miniature pot
		14	Thick texture body sherd with red slip
		16	Thin rim neck sherd of miniature jar with black band on the red slip
		22	Broken piece of Terracotta object
	27	Terracotta bangle	
10	25, 46.42N - 67, 33.25E	1	Plain neck sherd of large vessel-hand built
		14	Red body sherd with floral design
		15	Body sherd of jar with floral design
		21	Plain body sherd - hand made
17	25, 49.45N - 67, 28.03E	1	Red body sherd decorated with parallel lines in black color on red slip
		2	Body sherd with red slip
		4	Body sherd painted with geometrical designs
		6	Rim sherd decorated with black vertical lines on red slip
		28	Body sherd with decorated with circle design in black color on red slip
16	25, 48.85/90N - 67, 27.75E	1	Rim sherd decorated with parallel lines
		3	Rim body sherd of open bowl
		5	Body sherd with decorated with parallel lines