Analysis and contextualization of potential protohistoric petroglyphs at the Kalasha valley of Birir in Chitral

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Abstract

Petroglyphs were discovered in the Birir valley of district Chitral, Khyber Pakhtunkhwa province, Pakistan, on an ancient route connecting the Kalasha valleys with Nuristan, lower Chitral and Central Asia. The petroglyphs were engraved on a solitary schist stone. The rock, with associated structures, occupies a strategic location in the landscape, possibly representing a hunting outpost. The petroglyphs consist of 29 figures, including human, animal, geometric and indistinct figures. These figures seem to have been created through the use of a metal stylus/burin. The figures were produced through the percussion method, utilizing a stippling technique. The depiction of a dog, a goat and stylized human figures suggest a possible link to the subsistence and hunting strategies of the protohistoric people in the region. Based upon the limited archaeological knowledge of the region, the present petroglyph site may tentatively be dated to the 1st millennium BCE.

Keywords: Chitral Archaeology, *Kalasha*, Petroglyphs, Birir Valley, Protohistoric Cemeteries, Stippling Technique

Introduction

The petroglyph site of Birir is located at latitude 35˚ 38’ 22” N and longitude 71˚ 42’ 32” E, and at an altitude of 1780 meters above mean sea level. The site is situated about one kilometre to the south of village *Gurulodeh* in the Birir Valley, District Chitral, Khyber Pakhtunkhwa Province, Pakistan (Fig. 1). *Gurulodeh* is the largest village of the Birir Valley. Birir Valley is about sixteen kilometres in length from east to west and seven kilometres in width from north to south. It is the smallest of the three *Kalasha* valleys (Bamburet, Rambour and Birir Valleys) in terms of area and population, and of these three valleys is the most difficult to access. These three small valleys of Chitral are the last enclaves of the *Kalasha* community, the indigenous people of the Hindukush mountains in Pakistan, and their unique living culture. These three valleys are defined by glacial-fed rivers, which drain these valleys and empty into the Chitral River. Most of the agricultural activities and settlement are confined to the banks of rivers and piedmont slopes of the encompassing mountains. Small, glacier-fed water channels are the main sources of irrigation in these valleys. The field

owners and village communities maintain these agricultural channels as cooperative enterprises.

The Chitral district of Khyber Pakhtunkhwa Province is located at the convergence of South Asia, Trans-Pamir regions, Central Asia and China. It is the largest district of Khyber Pakhtunkhwa Province (formerly the North-West Frontier Province (NWFP)), Pakistan, covering approximately 14850 square kilometres area (Zahir, 2017a; 2017b). The present-day Chitral District shares borders with the Afghan provinces of Badakhshan, Nuristan and Kunar to the north and west respectively, Gilgit-Baltistan province (formerly the Northern Areas of Pakistan) to the east, and districts Upper Dir and Swat to the south and southeast (Ali et al, 2013; Zahir, 2017a; 2017b). The Wakhan corridor, to the north, separates Chitral from Tajikistan. Several mountain passes cross the Hindukush and Pamir ranges and connect with the area with Central Asia, Afghanistan and adjoining regions of Pakistan (Ali et al, 2013; Israr-ud-Din, 2008: 175).

As archaeological and historical scholarship related to Chitral is limited, history and prehistory of Chitral has been generally understood through the study of cemeteries, based on research conducted during the last two decades (e.g., Ali et al, 2002; 2005a; 2005b; 2010; Ali and Zahir, 2005; Hemphill et al, 2018; Zahir, 2016a; 2016b; 2017a; 2917b). A total of 47 cemeteries have so far been documented in the region (Zahir, 2016b). Out of the five excavated cemeteries, Gankoreneotek represents the largest excavated cemetery in Chitral (Zahir, 2017a; 2017b). Cemeteries in this region have been broadly dated from 8th century BCE to 10th century CE in Chitral (Ali et al, 2008; Zahir, 2016a). However, recent, but unpublished, radiocarbon dates from Shah Mirandeh Graves – Singoor indicate that medieval burial traditions continued through the 16th – 17th century CE (Narasimhan et al, 2018; 2019). Previous models for the burial traditions in northern and north-western South Asia envisaged their range of existence from the end of 3rd millennium BCE to the end of 10th century CE (Zahir, 2016a). These new radiocarbon dates extend the range of similar burial traditions to the last quarter of the second millennium CE in Chitral. Due to the vast spatial and/or chronological distributions of these cemeteries, previously understood as part of the Gandhara Grave Culture, are now best described under the umbrella term of "protohistoric cemeteries." Chitral cemeteries form a part of the larger pattern of elaborate burial traditions that existed in northern and north-western South Asia from 2nd millennium BCE onwards (Zahir, 2012; 2016a; 2016b; 2017a; 2017b).

Archaeological research in Chitral and *Kalasha* valleys

The archaeology of Chitral is less well-recognized than that of the surrounding regions of Swat, Dir, the tribal districts of Mohmand and Bajaur, the Vale of Peshawar in the Khyber Pakhtunkhwa province, and adjacent regions of Gilgit-

Baltistan province (Samad et al, 2012: 25; Zahir, 2017b). Except for the Tang Dynasty, Chitral did not figure prominently in the South Asian, Central Asian, and Persian empires that developed around Chitral (Zahir, 2017b). Chitral remained on the fringes of the Indus Civilization and other empires, such as the Achaemenids, the Mauriyans, the Indo-Greeks, the Kushans, and the Mughals (Zahir, 2017b). Thus, Chitral could not become part of the archaeological or historical narratives of north-western South Asia and received little or no attention from archaeologists until very recently (Zahir, 2017b).

The British colonial officer Major John Biddulph was the first to record archaeological evidence in Chitral and identified a ruined *stūpa* in Chitral (Biddulph, 1880: 109). In the first quarter of the 20th century, Sir Marc Aural Stein, the celebrated Victorian explorer and archaeologist, recorded the presence of historic forts, pre-Islamic houses, a Persian rock inscription, ancient pottery scatters or assemblages, a possible Buddhist monastery, and bronze arrowheads from Chitral (Stein, 1921: 34-39, 45-46).

Much of the early research in Chitral focused on the area's affiliation with the Gandhara Grave Culture. Prof. Ahmad Hasan Dani, the archaeologist par excellence of Pakistan, was the first to identify protohistoric burials and grave construction traditions and material cultures in Chitral (Dani, 1968: 36). Prof. Raymond Allchin of the University of Cambridge, UK, studied a collection of pottery from protohistoric graves at Ayun village, Chitral linking these with the Gandhara Grave Culture (Allchin, 1970). The Ayun village is situated at the mouth of all the three *Kalasha* valleys on the right bank of the Chitral River and controls access to and from these valleys. The rivers of the two *Kalasha* valleys of Bamburet and Rambour also empty into the Chitral River at Ayun.

Professor Giorgio Stacul of the Italian Archaeological Mission to Pakistan carried out limited archaeological excavations and explorations in Chitral in the late1960s. His excavations at the sites of Bakamak and Noghormuri revealed grave construction, positioning of the buried individuals within the graves, and the grave goods to be similar to the later phase of the protohistoric burial traditions of northwestern South Asia, known as Gandhara Grave Culture (Stacul, 1969: 99; Dani, 1968; Young, 2009; Zahir, 2012; 2016a; 2016b; 2017b). In the 1970's, small-scale excavations of a double burial, and the resultant pottery assemblage (including a terracotta human figurine) from a protohistoric cemetery at Singoor led researchers to argue for the presence of Gandhara Grave Culture at Chitral (Israr-ud-Din & Jan, 1972; Israr-ud-Din, 1979).

In 1999, British and Pakistani archaeologists conducted a small-scale survey of the central Chitral and Rambour valleys and a total of eighteen sites were identified and recorded (Ali et al, 2002). Of these, fifteen were cist-burials that were tentatively assigned to Gandhara Grave Culture (Ali et al, 2002; Dani,

1968; Young, 2009). Two protohistoric cist-burials were also recorded at Rambour valley during the survey (Ali et al, 2002: 651).

Researchers from the Directorate of Archaeology and Museums, Government of Khyber Pakhtunkhwa (formerly the NWFP province) and Hazara University, Mansehra conducted limited archaeological surveys and excavations in Chitral from 2003 to 2008 (Ali et al, 2005a; 2005b; Ali and Zahir, 2005). The team carried out excavations at the protohistoric cemeteries of Parwak, Parwak Lasht and Singoor (that is Shah Mirandeh and Gankoreneotek localities at Singoor). The construction of the graves, burial practices and artefact assemblages suggested strong links with the protohistoric cemeteries from Dir and Swat Valleys or Gandhara Grave Culture (Ali et al, 2005a; 2005b; 2008; Ali and Zahir, 2005). Radiocarbon dates from bones (taken from inhumations and cremation burials) suggested the dates range from the mid-1st millennium BCE to the end of 1st millennium CE [from ca. 790–420 cal. BCE (WK-22036; 2494 +/- 30 BP) to ca. 770–990 cal. CE (WK-22758; 1148 +/- 36 BP: WK-22759; 1157 +/- 37: WK-22760 +/- 37 BP)] (Ali et al, 2008).

The Directorate of Archaeology, Khyber Pakhtunkhwa province, conducted brief excavations at the site of Parwak Lasht in 2006-7 and discovered some 'pre-Islamic' structures there (pers. comm. Fawad Khan). A team of archaeologists from University of Leicester, UK and Hazara University, Pakistan conducted a systematic transect survey in the Ayun Valley and adjoining areas of Chitral and excavations at the sites of Chakasht graves at Singoor and Chillum Lasht Cave at Ayun (Ali et al, 2013; 2016; Samad et al, 2012; Young et al, 2012). Most of the discovered sites primarily belonged to the historic period, while some of the sites were associated with protohistoric cemeteries (Samad et al, 2012). Though, the historic period of Chitral is still not properly defined, the historic sites within this study were mainly confined to the 18th/19th century CE buildings, such as mosques and forts.

Six prehistoric sites, with stone tools, and some associated rock shelters, dateable from 8th to 3rd millennium BP, were discovered from the upper reaches of Yarkhun Valley in northern Chitral in the 1990s by a joint team of French and Pakistani researchers (Gaillard et al, 2002: 25). The possible persistence of stone tools by prehistoric communities until the first millennium BCE in Chitral is potentially significant to our broader understanding of the region's prehistory and needs to be further investigated in the future.

Ayun is one of the most fertile villages of Chitral valley with relatively large tracts of agricultural land. The village effectively controls access to three *Kalasha* valleys, serving as the major trading and communication conduit and hub for these valleys. The roads leading to the *Kalasha* valley pass through Ayun. During the 1999 archaeological survey, three cemeteries were reported from Ayun (Ali et al, 2002: 651). These included the sites of Thuryandeh,

Lashtotek and Saham Junah graves (Ali et al, 2002: 651). The documentation of Ayun was the first archaeological survey which identified protohistoric cemeteries within the *Kalasha* valley of Rambour (Ali et al, 2002: 651). These included the cist-burials at Balanguru and Chakguru at Rambour valley (Ali et al, 2002: 651; Zahir, 2012; 2016b). In addition, an archaeological survey in 2009 around Ayun led to the discovery of four protohistoric or Gandhara Grave Culture cemeteries, which are known as the Muldeh graves, Tolian graves, Sashkar-o-tek graves, and Barausht/Balausht graves (Ali et al, 2010).

A systematic transect survey on both sides of the Chitral River in 2009 – 2010 between Ayun and Darsoh villages, by researchers from the University of Leicester, UK and Hazara University Mansehra led to the discovery of eighty-eight archaeological sites, including ten protohistoric cist-burials (Ali et al, 2010; Samad et al, 2012; Zahir, 2016b; 2017b).

The small Jinjarait-koh valley, located on the right bank of the Chitral River and across the Darosh village, proved to be one of the most important archaeological localities in the region, where many sites were discovered. The locals believe that the Jinjarait-koh valley was initially populated by the *Kalasha* people and their entire population was either forced to migrate to other Kalasha valleys or converted to Islam.

In summary, although considerable archaeological research has been conducted in Chitral, the archaeological knowledge of the *Kalasha* valleys is still very restricted and, available data appears to be mostly linked with the protohistoric cemeteries of Chitral.

The Birir petroglyphs

The petroglyphs are located in a remote part of the Birir Valley, on the right/eastern bank of a small perennial, glacier-fed, stream that empties into the larger Birir River, a tributary of the Chitral River. The small stream runs from south to north and has carved a passageway between the mountains (Fig. 2). A small mule-path or footpath runs along this rugged passageway, which is still used by locals for inter- and intra-valley communication and transportation.

The petroglyphs are located at the edge of a largely barren mountain slope within a surviving coniferous forest. They appear to have been engraved on a single relatively large schist boulder that likely detached from the adjacent. The boulder has a large flat surface facing the sky, and offers a large space for resting and taking in a commanding view of the surroundings. The boulder measures about three by two meters in length and width and is around one meter in thickness.

The boulder is enclosed by wall structures on all sides, except for its western side, corresponding to the slope of the mountain and to the stream below. The

height of the walls ranges from half a meter to one meter, with a thickness of about half a meter. The wall enclosing the petroglyphs incorporates two room-like structures. These rooms are linked together through a narrow passage on the eastern side of the boulder. The walls on the northern side of the boulder continue on top of the rock, incorporating the rock into the structure of the small room on the northern side. The walls are constructed of relatively small irregular schist stones placed on top of the present ground surface without the use of any mortar or additional base. The highest existing wall structure on the northern side of the rock incorporates at least fourteen rows of irregular stones. The small rooms on northern and southern sides are linked to each other on the eastern side and include a relatively broad entrance from the western side, which overlooks the stream below, along with the opposing mountain slope. There is no evidence of covering or roof on top of the structure (Fig. 3).

The structures could possibly represent a hunting station. This site is located at a strategic location, where game animals from the enclosing mountains might have gathered for drinking water. It is equally possible that the room structures could have been a watchtower or a watching station, controlling access to the Birir valley from northern side. Evidence of past watchtowers at the entrance of Bamburet and Rambour valleys from Ayun village, still exists - and such features may represent a key defensive strategy of the former communities living in these regions. If the structure was indeed a hunting station, it would have been located within a convenient distance of the main village of the Birir valley and a successful hunt could have been carried out within the span of a day. The slope on the left/western bank of the stream, opposite the petroglyphs, has now been converted into agricultural fields and the fields are well maintained and fertile. The walls of the existing structures are not high enough to hide a standing hunter but are high enough to conceal a crouching hunter from the game animals. There was no visible material evidence of human use of the structure; nonetheless, some half burned wooden logs were present in the southern room, possibly indicating the seasonal or temporary use of these structures until very recently. The construction of makeshift or rudimentary structures is still very common within the *Kalasha* male communities who take their animals to high pastures for four months in summer (Young et al, 2000: 136).

In the absence of further material evidence – and because of the rudimentary nature of the wall structures, it is not possible to directly link the petroglyphs and the enclosing structures. However, it is worth noting that almost all the petroglyphs are drawn on the western side of the rock surface, possibly suggesting that the artist(s) was facing east and north when creating the petroglyphs. Moreover, the petroglyphs face west and towards the stream below. Similarly, both the entrances open to the western side. As there has been hardly any research carried out on the archaeology of the *Kalasha* valleys and the

chronology of building techniques in the region, we cannot assess whether the the room-like structures and the petroglyphs relate to different chronological and/or social periods, and whether the use of either locality was regular or seasonal.

The carved surface of the rock measures about 130 x 35 square centimetres in area; the petroglyphs do not cover the entire surface of the boulder (Fig. 4). The boulder has 29 individual figures (Fig. 5 and 6). These figures included five human figures, two animal figures, four walled structures, a geometric loop and eighteen indistinct or miscellaneous figures (Fig. 7). Almost all the figures range between 10 – 20 centimetres in width and height. All the petroglyphs, with a single exception of minor superimposition, were carved as isolated images.

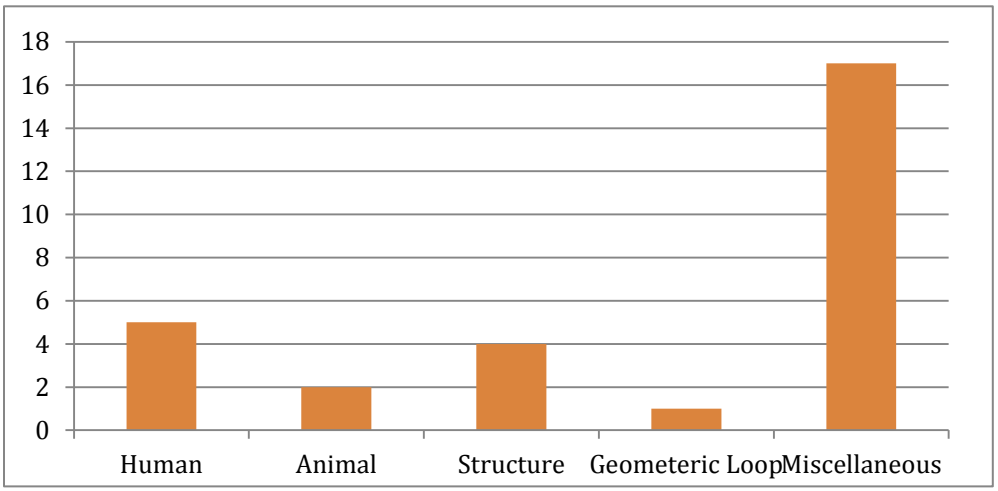

Figure 7: Classification of the petroglyphs at Birir valley of the five human figures, three are relatively clear representations and two are indistinct. Among these three clear human figures, the first one is a stylized, standing male figure with out-stretched arms and open legs (Fig. 8). Male genitalia were depicted via thick dotting or a cluster of closely located dots. It is possible that the male genitalia were later additions to the original human figure. The second human figure is also a stylized representation of a standing figure with half-stretched and half-raised arms and open legs (Fig. 9). The third human figure is similar to the first one, with a stylized representation and out-stretched arms and open legs. However, the left leg of the figure is slightly bent. The other two figures are comparatively crude or rough representations of human figures. The first of these, and the fourth overall, has relatively thickened body with half outstretched and half-hanging or half-suspended arms, possibly without a head. The lower portion of the body or legs and feet of the figure are thick in comparison to the abdominal region of the figure. The second relatively crude human representation is a thinly drawn stylized representation of a human body

in a horizontal position, with arms making a complete loop and legs wide open. Male genitalia were also represented in this petroglyph.

Two animal figures are drawn in proximity or in combination with the first two human figures discussed above (Fig. 8 and 9). The first figure, of a male mountain goat or ibex is represented in a stylized standing form with round head, pronounced eyes, straight long horns, and upright tail. It is equally possible that the mountain goat could be the representation of a domestic goat; however, there are no direct evidence of domesticated animals from Chitral region. Sizeable remains of domesticated animals, such as goat, sheep, cattle and even buffalo have been recorded from protohistoric archaeological contexts, primarily from urban and cemeteries contexts, in the neighbouring Swat valley (see Young, 2003). We may suggest transition from hunting to rearing of animals and pastoral economies at the same time when it happened in the Swat valley during 2^{nd} – 1^{st} millennium BCE. This could have been the case for the Chitral region as well.

Thick dotting or cluster of dots prominently represents the eyes and genitalia of the goat or ibex (Fig. 8). Considering the dotting patterns, intensity and depth in the petroglyph, it is plausible to assume that the details of the eyes and male genitalia were probably added later. The second animal figure is also represented in stylized standing form, possibly a dog, with elongated face, and prominent raised ears and tail (Fig. 9). Similar dog figures have been found in the petroglyphs of District Diamer, particularly at Thalpan and Chilas sites, in Gilgit-Baltistan province. The standing posture of the mountain goat/ibex is similar to the late prehistoric/Bronze Age ibex/*markhor* figures from Yasin valley, Gilgit-Baltistan province. The Yasin figures are depicted at "rest" and the posture of their body or legs "signal mostly tense rest and only partially pronounced movement" (Hallier, 1991: 12-13).

Beside the human and animal figures, there are four interesting geometrical representations. The first one is perhaps the representation of a roughly rectangular structure. The three sides of the structure are marked through 2-3 layers or rows of dots, while the irregular lower side is denoted by a single dotted line. The second geometrical representation is a lightly drawn rectangular structure divided into three parts. The lower two are almost equal in size and rectangular in shape, while the upper part is square in shape. The third geometrical representation is an elongated loop with a possible running knot, similar to a noose. The fourth geometrical representation is a roughly drawn rectangular shape.

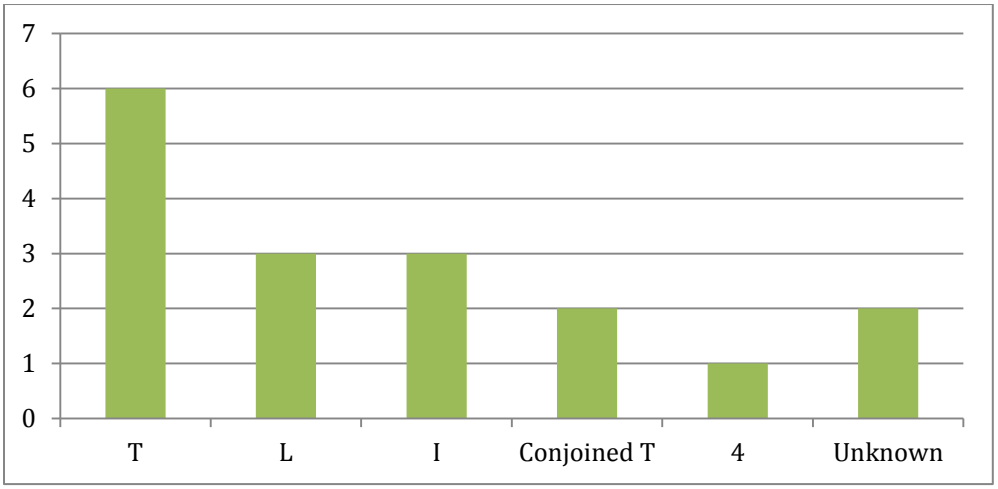

Figure 10: Details of Indistinct or miscellaneous representations

The largest category of petroglyphs is of the miscellaneous representations of different stylized forms or symbols (such as similar to Latin alphabet T, L and I). The most numerous of these categories is the representation of the symbol similar to Latin alphabet T (Fig. 10). Most of the T symbols seem to be very crude representations of the human body and all the T symbols are drawn with half-hanging arms. The symbols like Latin alphabet L and I are represented by three examples each. All the L-shaped symbols are inverted with slanting at an angle of around sixty degrees. Like to the T symbols, I-shaped symbols are depicted at a slightly slanting position. The most interesting of the miscellaneous symbols is a symbol resembling two inverted and conjoined-T symbols, with half-hanging and half-raised arms. It seems that the conjoined-T symbols were made through two different techniques, using two different tools and two different densities of dots. The upper T-shaped structure is finer than the inverted or mirrored T-shaped symbol. A single representation of inverted symbol like numeral 4 was also recorded on the rock, along with two indistinct figures.

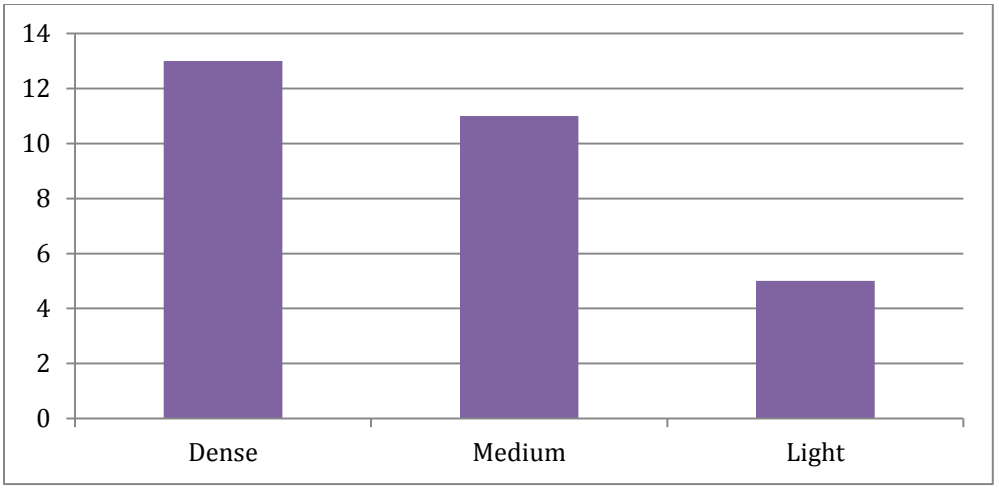

Figure 11: Details of the variations of the stippling technique

All the petroglyphs at the Birir valley were created out through the pecking method utilizing the stippling technique. The petroglyphs were formed through various degrees of shading using different densities and shapes of small dots. However, the density of the dotting within the petroglyphs differed from each other (Fig. 11). A large share of the petroglyphs (thirteen of the twenty-nine petroglyphs), were formed through dense dotting of the surface of the schist boulder, while eleven of the twenty-nine figures were carved through medium density of dotting. There were five figures that were carved through lighter dotting densities.

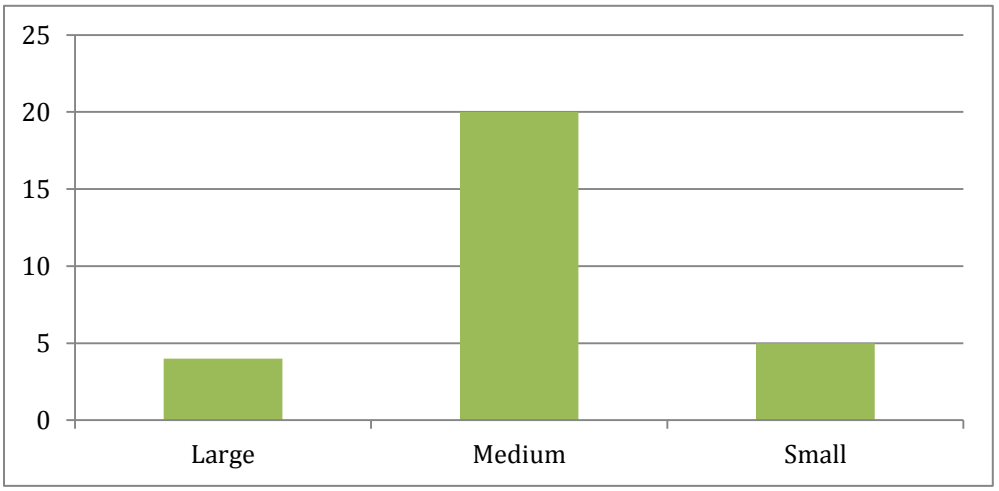

Figure 12: Details of the different Bronze/Iron Stylus or Burin

The close inspection of the petroglyphs revealed that at least three types of metal styluses or burins, probably of bronze or iron, were used in the stippling of the figures (Fig. 12). Based upon the size of the component dots and the thickness of the tips of styluses and burins used, the petroglyphs can relatively be classified into large, medium and small categories. Most of the petroglyphs (twenty out of twenty-nine), were carved through the use of a styluses or burins with tips of a medium thickness. Five and four instances each of petroglyphs generated with small and large tipped styluses or burins were also documented respectively at the site.

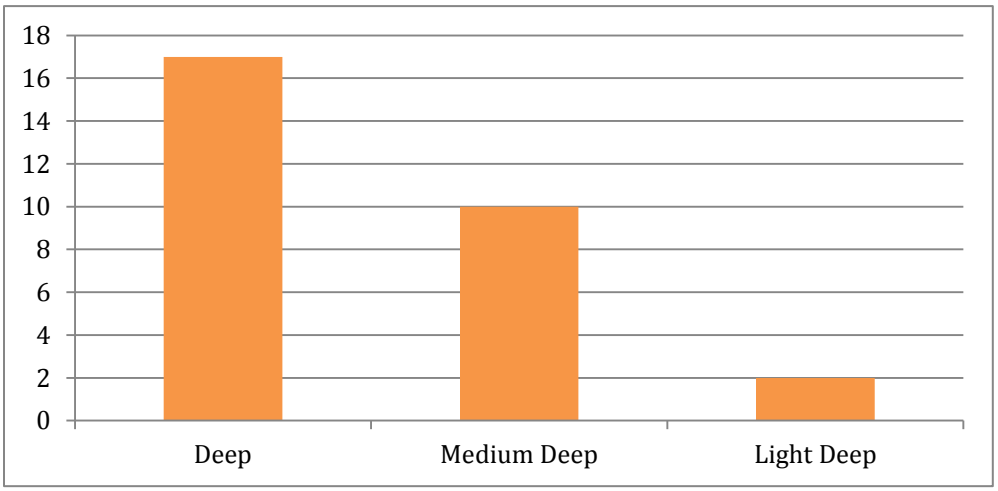

Figure 13: Details of the variation of the impressions on rock surface

The impression created on the surface of the schist stone through the use of metal styluses or burins also varied (Fig. 13). The impressions can be classified into three categories - deep impressions, medium-depth impressions and shallow impressions. The majority of the petroglyphs (seventeen out of twenty-nine petroglyphs) were formed through deep impressions during the dotting process or stippling. In ten petroglyphs, impressions of a medium depth were recorded. Two petroglyphs were formed via light-depth impressions. The petroglyphs created through shallow dotting were hardly visible to the naked eye.

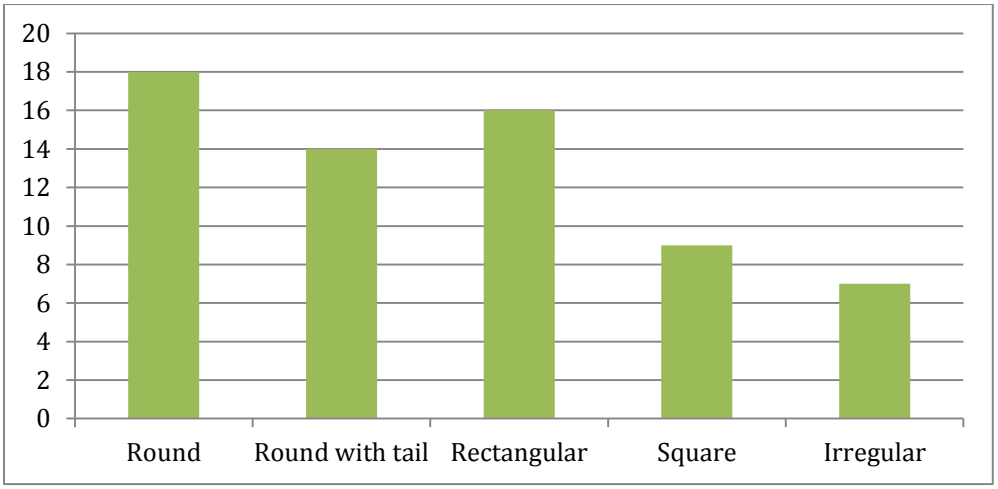

Figure 14: Details of the shape of dots in stippling technique

At least five different varieties of the dots could be discerned that were employed during petroglyph carving of the schist (Fig. 14). These included round dots, round dots with a tail, rectangular, square and irregular dots. The round and rectangular dots were observed in eighteen and sixteen petroglyphs respectively. The round dots with tail characterized at least fourteen petroglyphs. The square and irregular dots were found in nine and seven petroglyphs respectively and were the least represented dot types at the site.

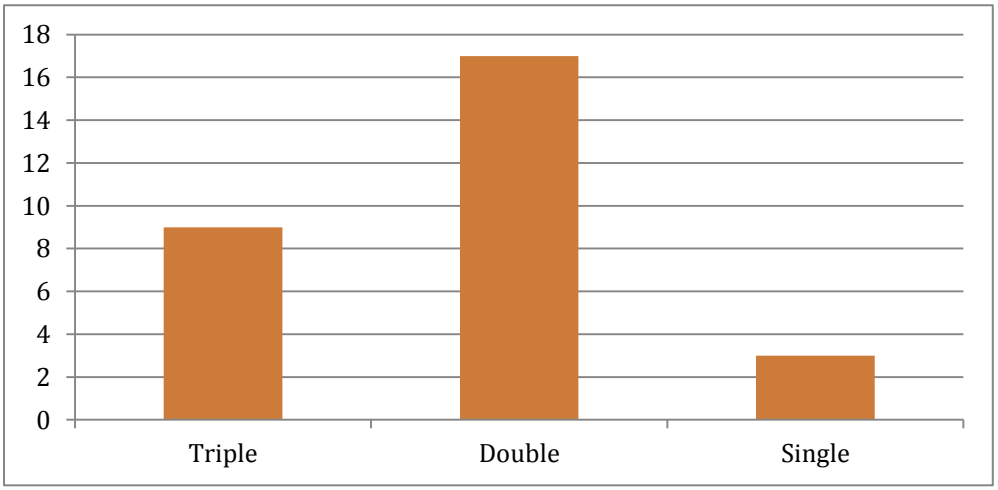

Figure 15: Details of the dotting type used within a single petroglyph

Finally, we also identified variation within the different dot types at the site. The dot types occurred as single, double, and triple dot types within a single petroglyph (Fig. 15). Although there were five different varieties of the dot

types observed in our sample, not more than three dot types were combined within a single petroglyph. Most of the petroglyphs, seventeen out of twenty-nine petroglyphs, were formed through two types, while three types were found in nine petroglyphs. A single dot type was utilized within three petroglyphs.

Contextualization of the Birir petroglyphs

The petroglyphs of Chitral have received little scholarly attention. Without detailed archaeological, artistic and stylistic investigations, most of the discovered petroglyphs in Chitral are dated to the 'prehistoric period', 'historic period' and Buddhist period, owing to their style and thematic content (Ali et al, 2005a; Khan, 2013). Most of the petroglyphs in Chitral depict stylized caprids, humans and elaborate stupa structures.

Stupa petroglyphs in Chitral

The first petroglyph of a Buddhist stupa was recorded by Major John Biddulph, the political officer in Gilgit, in 1880 at a roadside in the Koosht/Kusht valley of Chitral (Biddulph, 1880: 109). He considered it to resemble 'Buddhistic [sic] stone altars' of Ladakh (Biddulph, 1880: 109). However, the first detailed description and analyses of the Buddhist petroglyphs, and accompanying inscriptions, were carried out by Sir Aural Stein. He recorded three sites with petroglyphs depicting stupas and inscriptions in Brahmi script in Chitral (Stein, 1921: 37-40). These three stupa petroglyphs were recorded at the site of Pakhtoridini (near village Moroi), Rayin village in Mulkho valley and Charrun village (Stein, 1921: 37-40). The Brahmi inscriptions named a person, Raja Jivarmah, and based upon the style of Brahmi script, it was dated to 5th century CE (Stein, 1921: 39). Nasim Khan (2002: 180) dated the Charrun inscription between 4th and 5th centuries CE. Although site's name implied a southern or Indian connection, the style of the construction of the stupa as carved on the stones resembled the stupa construction tradition practiced in Kashgar and Khotan (Stein, 1921: 37–39). Stein (1921: 38) suggested that Buddhism in Chitral was linked with the Buddhism and Buddhist construction methods that developed in Bactria, rather than in Gandhara (Stein, 1921: 38).

However, it may also be important to mention here that the thousands of petroglyphs, particularly of the stupa drawings, in northern Pakistan, had not yet become part of the archaeological and historical discourse of the region at the time of writing of Stein's report in 1921. As a result, his assertions from that time cannot be accepted at face value. These stupa petroglyphs are similar to those drawn on rocks in northern Pakistan, especially at the sites of Thalpan and Chilas in District Diamer of Gilgit-Baltistan Province, meticulously recorded by the Pak-German Archaeological Mission. Similar stupa petroglyphs were also discovered at the nearby sites of Gumast and Shoor Gucch, and at another site on both side of the route leading from Garam Chashma to Daras Pass (Nasim Khan, 2002: 180).

Wild or domestic sheep and goat, and human figures

A prehistoric site, with ibex, *markhor* and human figures, were discovered near the Mastuj Petrol Station on the junction of the Mastuj and Shandur Pass road (Nasim Khan, 2002: 180) on an ancient trade and communication route. During the same survey, an interesting prehistoric petroglyph site, with hand and footprints, was discovered on the ancient route leading from Mastuj to Baroghal pass (Nasim Khan, 2002: 180). Nasim Khan (2002: 180) reported historic Buddhist petroglyphs and inscriptions at Charrun and the Pakthoridini stupa, and concluded the inscriptions were made by the same hand (Nasim Khan, 2002: 180). This is an important hypothesis and may suggest that the inscriptions and accompanying stupa petroglyphs, could relate to a single event or single artist passing through Chitral. An important, although not fully deciphered, long inscription in Sharada script was also recorded near the Arandu village, at the low altitude all-weather pass of Arandu, connecting Chitral with Afghanistan (Nasim Khan, 2002: 180). In 2007, Alberto Cacopardo published the photographs of three stupa petroglyphs of Charrun, Pakhtoridini and Rain (Cacopardo, 2007: 377-379). An inscription, in Proto Śāradā script, of unknown provenance and date at the Chitral Museum has recently been partially read and it mentions King Nāgārjuna or a king of Nāgārjuna (Nasim Khan, 2020).

Prof. Muhammad Nasim Khan (2002) discovered the petroglyph site of Jondhak, near the village Parsan, at Chitral. Most of the petroglyphs were of ibex, *markhor* (wild sheep), horses and dogs, and were carved through simple scratching or deep chiselling (Nasim Khan, 2002: 180). Most of the human figures were of males, mostly with extended or raised arms and the female were rarely represented in the petroglyphs (Nasim Khan, 2002: 179 – 180). Hunting and horse-riding scenes were also recorded at the site (Nasim Khan, 2002: 180). It is possible that a tradition of horse-and rider petroglyphs continued from prehistoric times into later historic periods. As the site of Jondhak was located on a major travel route, connecting Chitral with Garam Chashma, Badakhshan and beyond, the presence of prehistoric and historic petroglyphs indicate the use of the route, and communication between the regions in northern and north-western Pakistan and Central Asia, from prehistoric times to the historic. The petroglyphs were produced through two different methods, namely ‘simple scratching’ and ‘deep chiselling with sharp instrument’ (Nasim Khan, 2002: 180). The prehistoric and historic petroglyphs at Jondhak site had ‘high’ and ‘light’ patina respectively (Nasim Khan, 2002: 180). The author did not explain what was meant by high and light patina; however, it is possible that the high patina probably meant dark varnish.

Khan (2013) produced the first dedicated report of the petroglyphs in Chitral. The brief report described the petroglyphs in the vicinity of Parwak, near Mastuj, in the upper Chitral region, and near the excavated cemeteries of Parwak and Parwak Lasht (Ali et al, 2005a; 2005b; Ali and Zahir, 2005; Nasim

Khan, 2013). Most of the petroglyphs from the three sites of Tor Lasht, Nasargol [sic] – (Nasirgol by Stein, 1921: 46) – and Parwak–Mastuj road are of caprids, humans, and hunting and dancing scenes and these have been dated to the 'prehistoric times' (Nasim Khan, 2013: 102 – 103). The archaeological survey of Chitral in 2004, and with datasets from an earlier survey in 1997, reported a further ten 'prehistoric' petroglyphs in Chitral, along with few Buddhist petroglyphs already recorded in the region (Ali et al, 2005a: 94 – 95). These sites are Muleum Fort, Dhok Noghur, Shaali, Oweer, Wajuhat, Rabat, Khot, Pir Khot, and Gohkeer (Ali et al, 2005a: 94 – 100). All the prehistoric petroglyphs had representations of wild goats or caprids species and hunting scenes (Ali et al, 2005a: 98 – 100). Some of the petroglyphs, such as those at Wajuhat site, depicted twenty wild goats, carved in low relief (Ali et al, 2005a: 99).

Thus, the evidence of petroglyphs from Chitral can be classified into the prehistoric and historic epochs. The majority of the sites appear to be located on routes leading to the mountain passes, connecting the different valleys of Chitral, and linking Chitral with the surrounding regions of Afghanistan and Central Asia. About 18 prehistoric and four historic petroglyph sites have been discovered in Chitral so far. Most of the prehistoric petroglyphs show caprids, stylized humans, and hand and footprints. The petroglyphs were reported to have either been produced through scratching and chiselling and were primarily in low relief.

Comparisons with Birir petroglyphs

The Birir petroglyphs are characteristically different from other discovered prehistoric and historic petroglyphs in District Chitral in terms of methods and technique of petroglyphs, the choice of tools, and presentation and content of the subject matter. The prehistoric petroglyphs of Chitral seem to have been created through the use of stone hammers, while the historic petroglyphs seem to have been created with both stone hammers and metal hammers and chisels for obtaining deep grooves. The Birir petroglyphs were produced using possibly metal styluses or burins and through the pecking method and stippling technique, making the site unique not in the whole of northern and north-western Pakistan. The stippling technique has not been reported so far in the prehistoric and historic rock art traditions of northern and north-western Pakistan. Most of the recorded petroglyphs in northern Pakistan are pecked and have not been studied for the application of stippling technique till date (for example Bandini-König, 2003; Hallier, 1991).

Our identification of a dog and a possible wild goat, along with standing human figures may reveal subsistence pattern of the people of the region that might have been based upon goat-herding and/or hunting. Goat forming and herding has been the main subsistence strategy of the present day *Kalasha* community

(Young et al, 2000). The representation of the wild goat is still a common feature among the wall paintings on religious buildings, and on religious festivals, of the modern *Kalasha* people of the three valleys (Fig. 16). A small metal figurine of a wild goat with conjoined horns was discovered from 8th century CE burial from the protohistoric cemetery of Gankoreneotek, Singoor (Fig. 17). Similarly, a broken potsherd with a spout was excavated from an undated protohistoric grave from Shah Mirandeh cemetery at Singoor had a stylized head of a caprid with long straight horns (Figure 18).

Thus, within the archaeology and petroglyph traditions of Chitral, caprids, especially wild goats, are represented from prehistoric period to the historic period. These representations suggest their importance within the ideology, economy and subsistence strategies of the people living in these regions. When considered alongside ethnographic analogy, the recovery of skeletal remains of goats from protohistoric cemeteries, primarily dating to the 2nd – 1st millennium BCE, in the adjoining Swat district of Khyber Pakhtunkhwa have been used to make inferences about the the religious ideology, socio-economic and subsistence strategies of early cultures in northern Pakistan (Young, 2003; Zahir, 2012).

Within the context of the archaeological knowledge of the region, particularly in relation to the discovery of protohistoric cemeteries at Ayun village and Rambour valley and the surrounding regions, the Birir petroglyphs can be tentatively dated to 1st millennium BCE or before, possibly corresponding to the elaborate grave constructions, burials and grave goods known from this period in the Chitral archaeological record. However, future work will be necessary to assess the links between the petroglyphs and protohistoric cemeteries in the *Kalasha* valleys and Chitral. Locally, the Birir petroglyphs were carved in a solitary and relatively large boulder within the valley, a possible travel route or at a hunting station; future intensive research in the upper reaches of the route and Birir valley, and the two other valleys of *Kalasha* people, may lead to discovery of other petroglyphs and archaeological sites in the region which may shed more light on the landscape context and chronology of the Birir petroglyphs.

Conclusions

The archaeology of the *Kalasha* valleys, as the home and refuge to the last surviving indigenous and pagan communities of the Hindukush in Pakistan, is poorly understood. The first proper archaeological survey was conducted in these valleys in 1999, recording the presence of two protohistoric cemeteries. Our discovery of protohistoric petroglyphs within the Birir valley is therefore a key finding, providing insights into the landscape use, artistic traditions and life ways of the region's early occupants. The site is advantageously located within the landscape and on a communication route between the Birir valley and

surrounding regions, and the regions of Nuristan, Ayun village, District Chitral and Central Asia and beyond. The petroglyphs at Birir were produced through pecking method and stippling technique, a novel way within the petroglyphic traditions of northern and north-western Pakistan. The execution and subject matter of the petroglyphs are different from the rest of the prehistoric and historic petroglyphs sites in Pakistan.

In the immediate vicinity of the petroglyphs in the *Kalasha* valleys, the *Jinjarait-koh* valley and Ayun village, protohistoric cemeteries appear to dominate the archaeological record. More than a dozen protohistoric cemeteries have so far been discovered in these regions. Based upon the of the technique, content and execution of the petroglyphs, alongside presence of relatively large number of protohistoric cemeteries in the region, these petroglyphs can be cautiously dated to the protohistoric period within the archaeology of District Chitral. The subject matter of the newly discovered petroglyphs, such as the representation of a dog, goat or ibex and stylized humans, provide our first clues into the subsistence strategies of the region's protohistoric occupants It is important to conduct further archaeological research in the region, including systematic transect surveys and targeted excavations, which will help understand relationships between petroglyphs and protohistoric features, and establish a robust chronological framework for the Birir petroglyphs.

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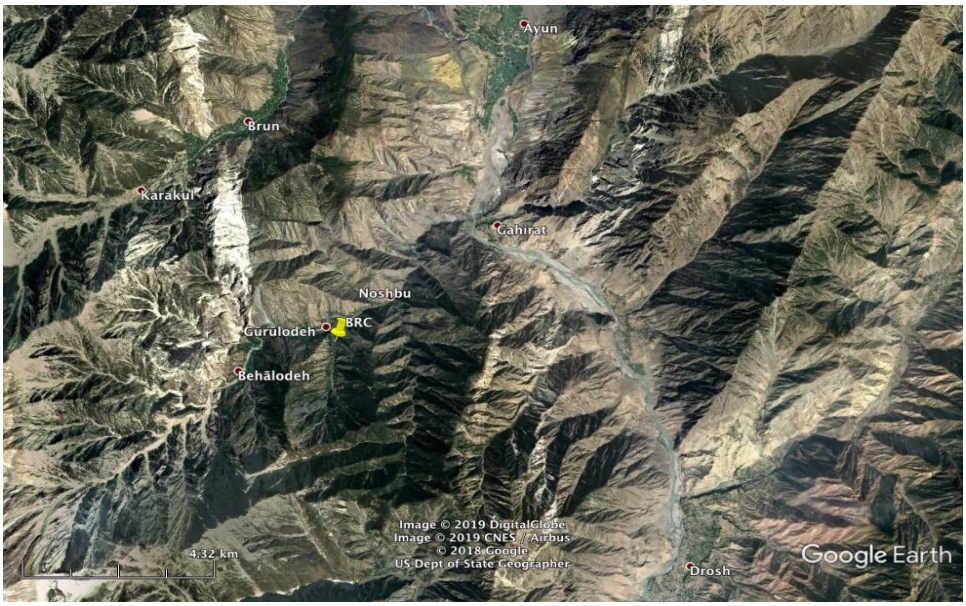

Figure 1: Location of the BRC – Birir rock carvings – Birir Valley Chitral (map courtesy: Google Earth Pro)

Figure 2: Location of the Birir site with petroglyphs, Chitral, Pakistan

Figure 3: The schist boulder with carving and enclosure structures, Birir Valley, Chitral, Pakistan

Figure 4: The petroglyphs on the boulder, Birir Valley, Chitral, Pakistan

Figure 5: Detailed photographs of the petroglyphs at Birir Valley, Chitral, Pakistan

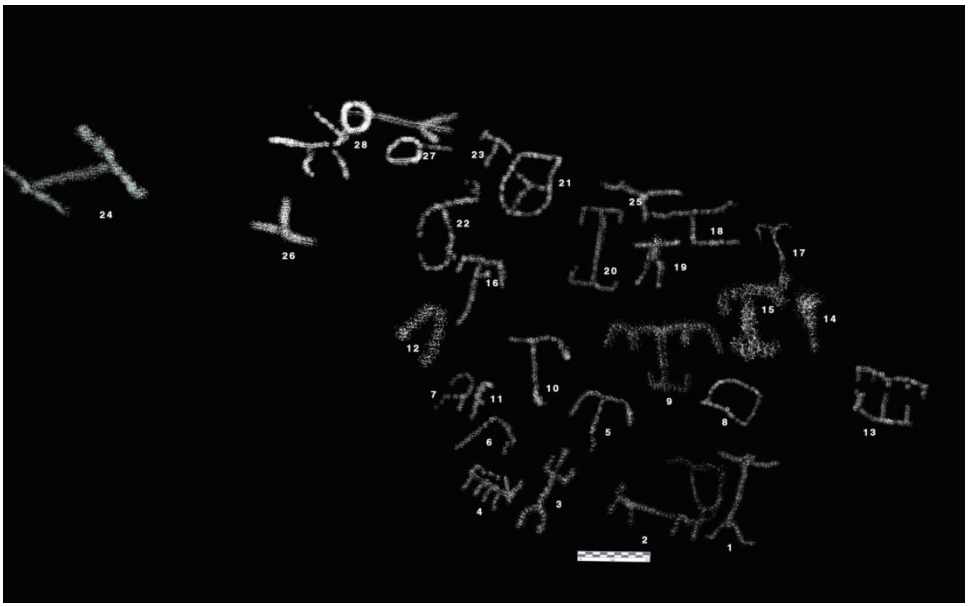

Figure 6: Detailed drawing of the petroglyphs at Birir Valley, Chitral, Pakistan

Figure 8: Detailed photograph of the standing male figure with straight horn mountain goat or ibex, Birir Valley, Chitral, Pakistan

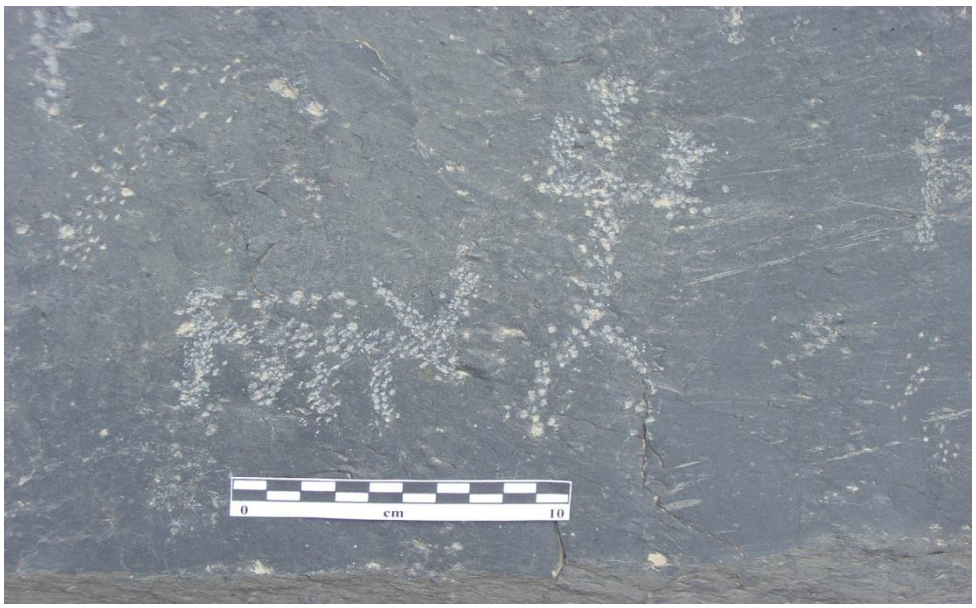

Figure 9: Detailed photograph of a male standing figure with half-raised arms and a dog, Birir Valley, Chitral, Pakistan.

Figure 16: Modern Representation of Ibex or Wild Goat on the outer walls of Jastakan or Kalasha temple at Bamburete Valley, Chitral (2005).

Figure 17: Metal Figurine of Ibex or Mountain Goat from 8th century CE grave at Gankoreneotek, Singoor, Chitral (2008).

Figure 18: Possible representation of the head of Ibex or Mountain goat on the spout of a broken vessel from Shah Mirandeh Graves, Singoor, Chitral (2005).