# The Beads from the Archaeological Site of Barikot: Preliminary Typological Data from the 2022 Winter Excavation Campaign in Swat, Pakistan

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Abstract: This article provides new perspectives on the typology of the beads that have been recovered from the 2022 winter excavation campaign of the archaeological site of Barikot (Swat Valley, Pakistan). The examined samples derive from multiple chronological periods and various archaeological contexts revealed during the recent fieldwork activities at Barikot. Preliminary results from ongoing studies appear to confirm, through the discussion of specific examples, that the typological characteristics of the latest finds correlate chronologically with the typological and stylistic features of specimens analysed in earlier studies. Evidence of illegal digging and pillaging activities is, likewise, well-documented within the recently revealed built-up area of the site, and the resulting chronological implications are considered in this contribution. This study provides, in addition, evidence for the operation and maintenance of long-distance trade and interaction networks between the Swat Valley and other geographic locations between the 1st century BCE and the 11th-12th century CE. The examination of the new specimens from different periods and areas of Barikot provides not only insight into the prevailing ornamental traditions and the daily lifeways of the inhabitants of the city but also considers the broader cultural and historical narratives that were developing in the region during this dynamic time.

Keywords: Barikot, Swat, Pakistan, Beads, Typology, Trade.

# Introduction

Nestled in the middle of the Swat Valley of northern Pakistan, the multi-period and wellexcavated site of Barikot or Bīr-kot-ghwandai has been the focus of major archaeological fieldwork investigations since the late 1970s and has been discussed extensively in archaeological scholarship, in particular, over the last decade (Baums 2019: 169; Olivieri 2015; Olivieri and Iori 2020, 2021; Olivieri et al. 2019; Tribulato and Olivieri 2017; Zellman-Rohrer and Olivieri 2019). The site with its acropolis, therefore, forms a crucial piece of evidence that we can use to try to understand both local and regional developments, the sequence of events, and potential discrepancies. As the archaeological and historical importance of Barikot is wellknown from earlier studies, there is no need to re-introduce the site in detail here again. Suffice it to say that the Barikot archaeological project of the ISMEO Italian Archaeological Mission in Pakistan, now headed by Professor Luca M. Olivieri (Università Ca' Foscari Venezia, Italy),

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was launched with the long-term goal to develop a better understanding of the complex process of urban development and the lifestyle of people living within an urban-scale settlement during the historical phases of Gandhara.

In the course of the excavations of the site from 1977 to 2022, beads or centrally perforated objects of many different materials, shapes, and sizes (among other finds) were found from different sectors of the ancient city and from all chronological periods of the site (Table 1). The series of studies carried out on these ornaments have provided a wealth of new information about the ways they were produced, used, traded and/ or discarded across the long occupation sequence of the site (Rabbani 2022a, 2022b, 2022c, 2020a, 2020b, 2019). As the site has been stratigraphically excavated, well-documented, and dated using radiocarbon analysis, our understanding about the range and type of bead raw materials and shapes that were favoured within each time period has significantly improved and expanded over the last few years.

Macrophase	Chronology	Cultural period
9a – 9b	11th – 15th century CE	Ghaznavid – Dardic
8a – 8b	ca. 600 – 1000 CE	Turki-Shahi – Hindu-Shahi
7	ca. 400 – 600 CE	Post-urban phase
6	4th century CE	Kushano-Sasanian
5b	2nd half of the 3rd century CE	Kushano-Sasanian
5a	1st half of the 3rd century CE	Late Kushana
4b	2nd century CE	Mature Kushana
4a	1st – 2nd century CE	Early Kushana
3b	1st BCE – 1st century CE	Saka-Parthian
3a2-3a4	end-2nd century BCE	Indo-Greek
3a1	mid-3rd - early-2nd century BCE	Graeco-Bactrian
2b	end-4th – mid-3rd century BCE	Mauryan
2a2	5th – mid-4th century BCE	Achaemenid
2a1	6th – 5th century BCE	Pre-Achaemenid
1a-1b-1c	1300 – 800 BCE	Late Bronze Age – Early Iron Age
0	1700 – 1400 BCE	Bronze Age

Table 1. Chronology and cultural periods of Barikot

Fieldwork activities have, in the last three years, significantly expanded towards the northern and central areas (Fig. 1) both inside and outside the limits of the city (trenches BKG 16, 17, 18, 19, and 20). During the 2022 winter campaign, various types of beads were collected from the excavated compounds of Barikot - many of which are familiar to us from earlier studies already (Rabbani 2022a, 2022b, 2022c, 2020a, 2020b, 2019). Although some were recovered from wellsealed and stratified archaeological contexts, most of them derive from large, deep pits - the latter a product of contemporary smuggling groups who were involved in the illicit trafficking of antiquities. From among a total of some 150 new beads, the current study focusses, in particular, on the presentation and discussion of the typological data of five notable examples – though they were, like most of the other new samples, not found from within entirely undisturbed deposits. Despite the recorded evidence of pillaging and partial disruption of contexts, it would, nevertheless, be useful to talk about some of the most notable types of beads in the new assemblage.

The list of raw materials includes, among several unidentified specimens, terracotta, glass, carnelian, schist, quartz/rock crystal, faience, polymetal alloy, marine, and cowrie shells (Fig. 2). At this preliminary stage of the analysis of the new assemblage, it is not possible to verify the typology of all the beads for each material. Future studies are, however, expected to show and include detailed drawings of each type of bead from Barikot. The discussed examples are not only surface finds, but also come from wellpreserved architectural units including what appear to be partially paved open areas, small residential quarters, and sacred Buddhist areas. The study of the precise function of the revealed contexts in these areas of the site is currently under investigation. Due to the fact that the study of these ornaments themselves is, likewise, ongoing, some of the data and interpretations are provisional and/or are limited, to some extent, by chronological uncertainties as stated earlier. They may, consequently, need to be revised as our research investigations continue. Regardless, the existing Barikot data has, as a result of being well-documented and dated, provided us with a solid foundation to carefully propose the chrono-typological placement of various types of materials that remain unstratified including beads. To better define the transitional stages along Barikot's long chronological span of time,



Figure 1. Trenches BKG 16 and 19 in the central area of the ancient city of Barikot. Courtesy of ISMEO.



Figure 2. Raw materials of the new collection of beads (Note: Number of beads shown is not representative of the total number of beads in circulation at the site during the individual periods).

I use, based on the bead data, a local variation of the terminology suited to Barikot and propose the following chronological sub-divisions: The time bracket of the Early Historic and Late Historic periods should be placed between the ca. 6th century BCE – 4th century CE and ca. 5th – 15th century CE respectively.

## Discussion

The recent excavations at Barikot have revealed several types of beads that correlate chronologically with the typological features of beads analysed in earlier studies (Rabbani 2022a, 2022b, 2022c, 2020a, 2020b). Among the beads made from semi-precious stone materials (Fig. 3), they include a notable bleached carnelian bead - rectangular short barrel in shape (BKG 8596: Fig. 4). The motif of the bleaching is that of a double axe. This carnelian bead is affected by post-depositional processes or burning, which has caused the colour of the surface of the stone to turn, to the most part, from red orange to white while carbon has poured into the bleached white design causing it turn black. Bleached carnelian bead production starts at Indus sites during the 3rd millennium BCE (Kenoyer 2020) and spreads across various parts of the subcontinent and other distant regions in the succeeding time periods (Uesugi 2021, 2020). They appear, according to our present knowledge, much later at Barikot in Macrophase 3a – that is the Graeco-Bactrian period (Rabbani 2020a). Bleached carnelian beads with a double axe motif have been found at Barikot before dated to Macrophase 4a – that is the Early Kushan period (Rabbani 2022c: 189-90). It would be, therefore, reasonable to assign BKG 8596 to Macrophase 5a – that is the Late Kushan period of Barikot (rather than Macrophase 6 or 7).

There is, moreover, archaeological evidence of cultural connections between Barikot and Taxila as indicated by the recovery of a particular bleached carnelian bead (Dikshit 1949: 56-57: Pl. VIII, no. 6), which is also decorated with the double axe bleached design comparable to the Barikot specimens. These permanent white designs may have held some special cultic significance, but it

is also possible that they were simply decorative elements needed to meet the demand of the urban population. In terms of the provenance, carnelian could have come from either the region of Sistan in Iran over 1200 km to the west or Gujarat some 1200 km to the southeast (Law 2011; Tosi 1969: 374). Future studies involving the chemical characterisation of the raw material and SEM analysis of the drill hole of BKG 8596 will enable us to determine if the carnelian came from a source area within South Asia or elsewhere. As the use of bleached carnelian beads, rectangular short barrel in shape, is already well-documented at Barikot from earlier studies (Rabbani 2022c: 189-90), the results not only support our existing interpretations in terms of the use of semi-precious stone materials at Barikot during the Kushan periods but also the integrity of our chronological assignments for the finds.



Figure 3. Beads of semi-precious stone materials (not to scale) found during the 2022 winter excavation campaign at Barikot. Courtesy of ISMEO.



Figure 4. A bleached carnelian bead made in the rectangular short barrel shape (BKG 8596: Macrophase 5a). Courtesy of ISMEO.

Earlier studies have also demonstrated the popularity in the use of beads made from marine shell that occur in many different shapes during the Saka-Parthian and Kushan periods of Barikot. This long-distance material was probably imbued, as indicated in earlier studies, with some form of symbolic-ideological value and meaning in relation to the Buddhist faith, which we see firmly manifested in the religious configuration of the region at the time (Rabbani 2022a, 2020a). The rule of the Saka-Parthians and Kushans, in fact, corresponds to a time that is referred to as 'the great flowering of Gandharan Buddhism' in the literature (Callieri 2002; Coloru et al. 2021: 127; Puri 1994; Salomon 1999: 180). In this regard, the recent fieldwork investigations have, not surprisingly, revealed additional evidence not only for the use of marine shell but also cowrie shells.

The excavations at trench BKG 1921 have, for instance, led to the discovery of a lenticular short biconical bead of marine shell (BKG 8597: Fig. 5). From the same context and stratigraphic unit, we note the discovery of numerous fragments of visual art reliefs of the Buddha and other figures (among other finds). That BKG 8597 was imbued with Buddhist symbolic-ideological meaning and/ or used in devotional practices can, based on the discovery of these contemporary art materials, not be ruled out. Similar types of beads have already been documented in earlier work (Rabbani 2022a, 2022c), which were securely dated to the Saka-Parthian and Kushan periods of Barikot. Based on typological grounds, it is, as a result, reasonable to assign BKG 8597 to Macrophase 5 (rather than Macrophase 6 or 7). The marine shell would have been acquired from the Arabian Sea that is some 1200 km to the south of Barikot (Gaur et al. 2005: 944; Kenoyer 1983; Micheli 2014: 225, 2020: 246-7; Yang 2011: 2-3, 2018).

Another important discovery is a long biconical bead of terracotta collected from trench BKG 19.6 (BKG 9168: Fig. 6), which is dated to Macrophase 5. BKG 9168 has been inscribed with a letter of the Brahmi script that we can read as 'ya' (Stefan Baums, personal communication). A few inscribed terracotta beads in Greek and the Kharoshthi script have been found at Barikot and



Figure 5. A lenticular short biconical bead of marine shell (BKG 8597: Macrophase 5). Courtesy of ISMEO.

other sites in Swat before (Rabbani 2022c: 208-209). It is possible that there are more inscribed examples of beads that have been missed or misinterpreted as examples with decorative geometric lines. Though unlike inscribed pieces of ceramics, inscribed beads do not appear to form an important genre of Gandharan epigraphy. The identified letters may represent the maker's or owner's marks, but it is currently difficult to detect, in the absence of further examples, potential patterns or determine the precise role played by BKG 9168.

To try to determine the function of BKG 9168 from the primary context data point of view is also not possible. This is because BKG 9168 was found, among other small-sized items, in the well-constructed water drainage system of the built structures in trench BKG 19 and may, therefore, represent an item lost or thrown away during bathing. The discovery of BKG 9168, nevertheless, adds further significance to terracotta as a valued material that must have had, based on earlier studies (Rabbani 2022c, 2020a), a multi-functional purpose during the Kushan period. The data shown in figure 2 seems to indicate, in any case, the popularity of terracotta beads among the people of Barikot, in particular, during the Saka-Parthian, Kushan, and Kushano-Sasanian periods. The terracotta for beads was either produced from high-quality clay collected from the local alluvial deposits of the Swat River and/or from sacred Buddhist sites nearby.

Among the notable examples of beads in



Figure 6. An inscribed long biconical bead of terracotta (BKG 9168: Macrophase 5). Courtesy of ISMEO.

the assemblage is a short biconical bead of polymetallic alloy (BKG 9227: Fig. 7) - the first specimen of its kind from Barikot. Although metal working areas with abundant copper slags and crucibles are well-documented at Barikot since the Indo-Greek period, no bead producing workshop has been found. As we also appear to lack evidence for the use of such types of beads at other regional centres including Taxila (Marshall 1951: 564-65, 739), it is, therefore, possible that BKG 9227 was imported to Barikot through longdistance interactions or trade. In connection with this point, it is, as such, interesting to note the discovery of numerous short biconical beads of metal from the archaeological sites of Nargizava and Mollaisagly in what is now Azerbaijan, which are typologically similar to BKG 9227 (Guluzade and Agayev 2012: 47-9). BKG 9227 may have been, as a result, traded to Barikot as a finished product from territories more than 2000 km to the north-west.

The chronology of BKG 9227 is uncertain, but it probably falls, based on the Barikot archaeological sequence and the chronological data of the beads from Nargizava and Mollaisagly, between the 3rd century BCE and the 1st century CE (Guluzade and Agayev 2012: 25). BKG 9227 was possibly, according to Luca M. Olivieri, in circulation at Barikot during the Saka-Parthian period – a time when not only luxury items, but also technology arrived in Swat and the wider region from the west (Coloru *et al.* 2021). As we currently do not have the data to determine the precise nature of its alloy, we are not in the position to argue if BKG 9227 was produced through the damascening metalworking technique. Was BKG 9227 considered a *Pañcaloha* or a five-metal alloys item imbued with sacred or auspicious meaning? Were the ornaments from Nargizava and Mollaisagly also produced from polymetallic alloy? These are some of the questions that need to be explored and addressed in future studies.



Figure 7. A short biconical bead of polymetallic alloy (BKG 9227: Macrophase 3b). Courtesy of ISMEO.

The excavations at Barikot have, in addition, revealed important archaeological evidence for the continued production and use of ornaments made from vitreous materials, for example, in the form of an ovoid bead of glass with a yellow-onblack colour dated to Macrophase 8-9 (BKG 9482: Fig. 8). With regards to the beads from the second half of the 1st millennium CE, B. Deo noted the use of countless varieties in the manipulation of glass at sites across the subcontinent (Deo 2000: 120). The ongoing studies of the ornaments especially from Late Historic Barikot have not only provided new important perspectives on the production and use of beads but also support Deo's observation as we do note the popularity of glass materials among the people of Barikot at this time. It is during this time that Barikot opens up on an international scale to wider regional influences and interactions with various distant localities.

While terracotta was the most popular raw material in use for beads at Barikot during the Early Historic period, the dramatic increase in the use of glass, in particular, in Macrophase 8 (of the Late Historic period) effectively replaces terracotta as the most dominant material circulating at the site. Visual observations have already led to the identification of various types of Indo-Pacific glass beads, which were in circulation at Barikot. The use of Indo-Pacific glass beads increased dramatically in Macrophase 8, integrating Barikot more firmly within the vibrant Indian Ocean trading sphere (Rabbani 2022c). Glass may have been traded in a finished form because, according to the studies of I. Angelini (Università degli Studi di Padova, Italy), thus far there is no conclusive evidence for the manufacture of glass beads onsite (the presence of some pieces of glass waste leaves the question open).



Figure 8. An ovoid bead of glass with a yellow-onblack colour (BKG 9482: Macrophase 8-9). Courtesy of ISMEO.

## Concluding remarks

In this brief contribution, the typological features of some of the most notable beads have been presented and discussed, which were recovered from recent fieldwork investigations at Barikot. This preliminary typological study has, despite some chronological uncertainties, demonstrated that it is possible to assign a more reliable chronology to several of the examined specimens based on secure and reliable chronological parameters established in earlier studies (Rabbani 2022c). The well-dated beads from Barikot can. therefore, be used as a comparative dataset or practical tools for not only carefully trying to date and re-interpret the beads recorded from other regional sites but also from Barikot itself that do not have the specific chronological data that is required. The selection of beads that have been the focus of this paper were probably imbued with some form of socio-economic and/or symbolicideological value (Rabbani 2022c). Future studies have the potential to enable us to unravel the precise meaning and role of beads not only in the lives of the inhabitants of Barikot, but also communities in other adjacent regions of South Asia.

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