

Investigating gilding techniques on Gandharan stone sculptures and architectural components: a preliminary note

Claudia Ramasso

Curator of South and Southeast
Asian Art – MAO Museo d'Arte
Orientale, Torino

opposite page

Fig. 3

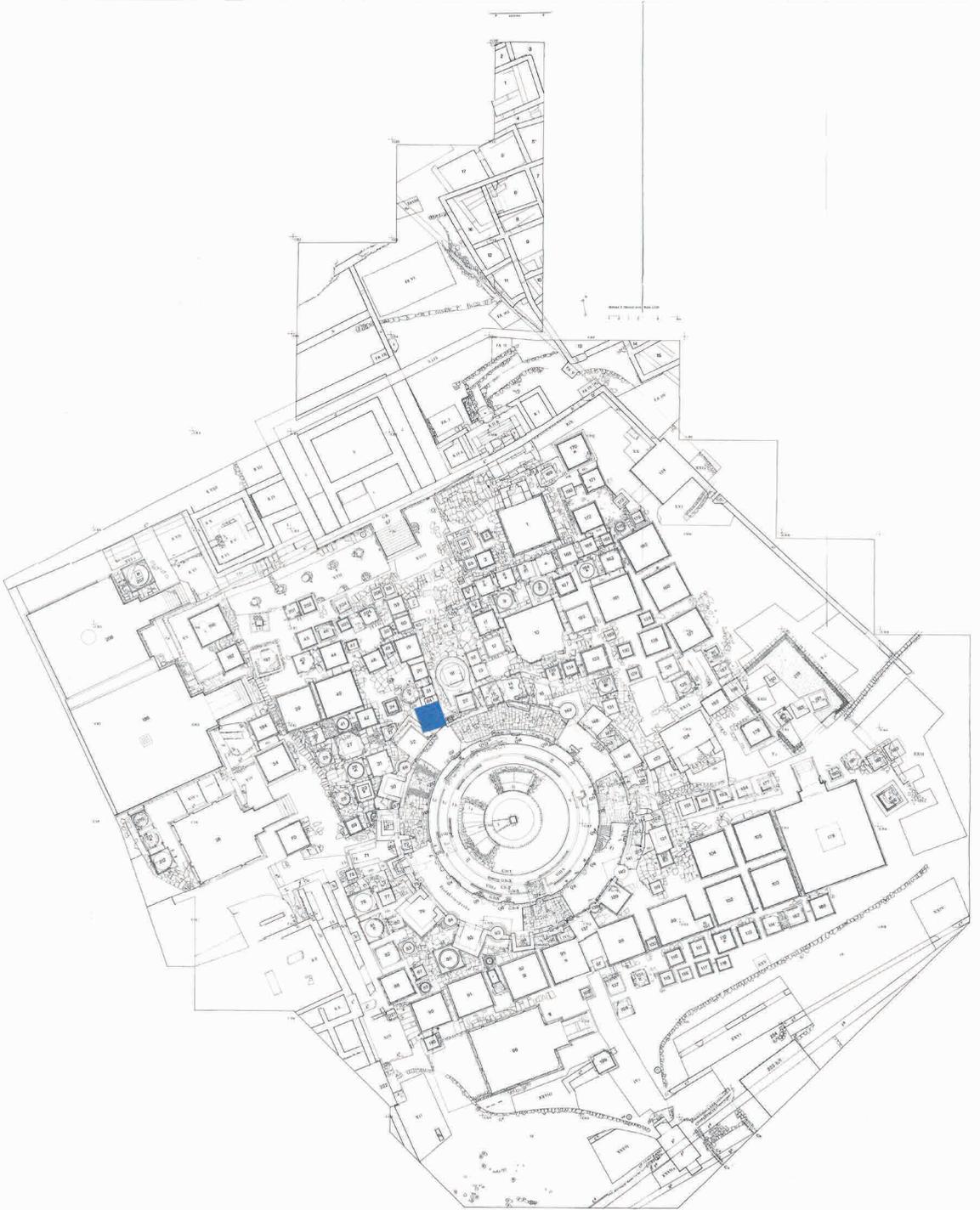
Butkara I (Swāt Valley,
Mingora, Pakistan).
General plan with stūpa
n. 17 highlighted in blue.
Published in Faccenna,
1980, part 5.2.
Courtesy IsMEO Italian
Archaeological Mission
in Pakistan.

Abstract

Taking into account the reports on archaeological excavation and the resulting successive publications, the present article wants to define the exact place of origin and an accurate dating for a schist bracket showing traces of gilding, currently preserved in the MAO Museo d'Arte Orientale in Turin (Inv. n. IAp/151). The bracket has been unearthed during excavations carried out between 1956 and 1962 by the Missione Archeologica Italiana at the site of Butkara I (Pakistan). In 2016, the conspicuous gilding still present and the bole underneath it have been scientifically analyzed by the ISCR, Istituto Superiore per la Conservazione e il Restauro based in Rome. At present, the ISCR is carrying out important studies at international level on the polychromy and the gilding of stone and stucco elements pertaining to the Buddhist artistic production of the ancient region of Gandhara, an area at present situated between the two nation-states of Pakistan and Afghanistan.

The gilded bracket at the MAO Museo d'Arte Orientale

The collection of Gandharan art at the MAO Museo d'Arte Orientale in Turin preserves a considerable number of archaeological finds from the Buddhist Sacred Area of Butkara I. Between 1956 and 1962 the excavations carried out in the Swāt Valley by an Italian Archaeological Mission — led by the IsMEO from Rome and Centro Scavi e Ricerche in Asia from Turin, under the direction of Domenico Faccenna — uncovered Butkara I, one of the most important Buddhist Sacred Areas of Gandhara, located in the Swāt Valley near the village of Mingora (Khyber Pakhtunkhwa, formerly North West Frontier Province), Pakistan. The importance and complexity of the site, together with the scientific rigour of the excavations, which for the first time in the ancient Gandhara region were conducted with particular attention to stratigraphic analysis, have provided important chronological information about the evolution of architectural styles and figurative Buddhist arts of that area. The archaeological site includes a Buddhist Sacred Precinct connected to a large Inhabited Area. The central nucleus of the site is a Great Stūpa (GSt.), the earliest construction of which (GSt. 1)



dates back to the 3rd century B.C. (Faccenna, 1980, part I, p. 32), the period of the first great spread of Buddhism in Asia from its place of origin in Northern India. Over the centuries the site, an irregular square of 75 × 80 metres, has undergone many architectural transformations and additions, reaching a total of 227 buildings that include many minor *stūpas*, columns, monasteries and shrines containing Buddha and Bodhisattva images. Currently their remains are in close proximity to one another. The Great Stūpa underwent reconstruction several times, each of them encapsulates the previous one: the remains of Great Stūpa are the result of four successive modifications (GSt. 2-3-4-5) of the ancient structure (Gst. 1), a large dome in blocks of dark phyllite resting on a cylindrical foundation, both coated with plaster. The five architectural periods of the Great Stūpa correspond to a variety of building techniques and decorative motifs; they also coincide with several periods in which the Sacred Precinct and the monuments it encloses were developed (for a detailed description of the five periods of the Great Stūpa of Butkara I, see Faccenna, 1980, part 1, pp. 21-127). The height of the splendour of the Sacred Precinct of Butkara I probably occurred with the third period of the Great Stūpa, GSt. 3, dated between the 1st and the 3rd century A.D. The first period of the following stage (GSt. 4, 4th-7th century A.D.) attests to great expressive maturity. Thereafter, a slow decline prevailed during the last period (GSt. 5, 8th-10th century A.D.), when the Great Stūpa was rebuilt following its destruction in the 7th century A.D. During subsequent reconstructions stucco was increasingly used to replace lacunae in the schist decorations and also to add new sculptural elements (Filigenzi, 2007, pp. 239-244; Olivieri and Filigenzi, 2017, pp. 85 – 90; Behrendt, 2017, pp. 159-161).

Among the sculptural and architectural elements uncovered during the Butkara I excavations, a few stucco and stone (schist) finds show traces of polychromy or gilding; the use of coloured plaster is equally evident on the surface of monuments. Notably, as far as the stone finds are concerned, traces of gilding can be found on statues and narrative reliefs, as well as on the cornices that framed the latter. In some cases, the gilding of the cornices also extended to the architectural elements and walls of the monuments (Faccenna, 1980, part 3, pp. 703-722). Since 2012, a research group headed by the ISCR, Istituto Superiore per la Conservazione ed il Restauro, based in Rome, in collaboration with the former Museo Nazionale d'Arte Orientale "Giuseppe Tucci" in Rome (at present MuCiv, Museo delle Civiltà – Museo d'arte orientale "Giuseppe Tucci") and with the Missione Archeologica Italiana in Swāt, directed by Luca Maria Olivieri, has begun to investigate some technological and productive aspects of Gandharan art. In particular, preliminary studies have evidenced the need to investigate through adequate diagnostic instruments an element which until now has not received due attention, i.e. the polychromatic or gilded coating of sculptures and Buddhist monuments in the ancient region of Gandhara (Pannuzi, 2015, pp. 9-15). In the following years, the ISCR has continued its research in this direction analyzing samples taken from different sculp-



tural elements, which have produced important results published in the present volume. The artworks analyzed include a small bracket measuring 11,7 × 19,8 cm, found during excavations by the Missione Archeologica Italiana in the Swāt Valley (1956 – 1962) and presently preserved at the MAO Museo d'Arte Orientale in Turin.

In his excavation report, among the gilded architectural elements, Faccenna (1980, part 3, p. 721, note 1) mentions two findings in particular: a crossbar, Inv. no. 3941 and a bracket, Inv. no. 4581. The latter has been consigned at the time Museo Civico of Turin in the 1963 (fig. 1). The bracket, which is currently catalogued at the MAO Museo d'Arte Orientale of Turin under Inv. n. IAp/151, is a double volute type with vertical groove (Faccenna and Filigenzi, 2007, p. 96); the part of the body has triangular profile with two volutes at the upper and lower corners, while the tenon portion is missing. The upper part has two fillets, lower one is recessed below the upper one, followed by a row of dentils and bars of smaller height and width. This type of bracket is frequently found in the Swāt region (Zwalf, 1996, vol. I, p. 61). The bracket Inv. n. Iap/151 presents calcareous concretions that partly cover the gilding (gold leaf?). Indeed, the bracket still preserves ample areas of the original gilding that probably covered the whole object: despite lacunae, the most extensive areas of gilding can be found on the central part

Fig.1
Gilded bracket.
Butkara I (Swāt Valley,
Mingora, Pakistan),
1st – 2nd century A.D.
Schist with traces of
gilding, 11,7 × 19,8 cm.
MAO, Inv. n. IAp/151.
Courtesy Fondazione
Torino Musei.

of the bracket and on the upper volute, however, there are also visible traces of gilding on the lower volute and on the second dentil from the left. High-resolution imaging shows further fragments of gilding on the fourth dentil from the left, on the recessed bar next to the second dentil, and on the terminal part to the right of the upper bar. Slight traces of red pigment are also visible, especially on the terminal part of the upper bar (fig. 2). In the catalogue of the *Sculture Buddiste dello Swat* exhibition, these remains are described as a red bole used as under layer for the gilding. Indeed, the caption about the golden bracket contains the following text:

Frammento di mensola con doppia voluta semplice. Restano tracce abbondanti della doratura che doveva coprire tutta la superficie a vista. Tracce del colore rosso di preparazione.

(Sculture buddiste dello Swat, 1963, p. 18, fig. 105)

The catalogue does not mention the name of the author of the texts, however, from correspondence between Vittorio Viale, the then Director of the Museo Civico of Turin, where the exhibition was held, and Domenico Faccenna, one may deduce that the caption had been written directly by Faccenna's colleagues (Archivio Museo Civico, CAA 1150, segnatura, 1963 – Scavi archeologici in Asia).

The gilded bracket was unearthed during the excavation of a minor *stūpa* (n. 17) that overlooks the circular ambulatory passage intended for ritual circumambulation (*pradakṣiṇapatha*) of the Great *Stūpa* (fig. 3). The *stūpa* lies on the Western side of the Northern entrance of the *pradakṣiṇapatha* and is considered to be one of the most noteworthy *stūpa*, within the variety of this class of monuments (Faccenna, 1962, vol. 1, pp. 39-40). The *stūpa* n. 17 has a quadrangular base and green schist decorations. The *stūpa* n. 17 (fig. 4) is worthy of note not only because the first level of its base is preserved, but part of the second as well, reaching a total height of 1.23 metres, while no remains of the hemispherical dome (*aṇḍa*) have been found. Both levels are square in shape; the second is more recessed compared with the first. The 1st storey consists of a base composed of a plinth, torus and cavetto, walls built with four rows of soap-stone blocks and an arched cornice. Each wall is decorated with four columns and two angle pilasters in green schist. The 2nd storey is noticeably set back and consists of a base composed of a plinth, torus and cavetto, walls built with a row of soap-stone blocks and a badly damaged frame. The walls are decorated with six quadriglyphs on each side, including the angular ones, fixed by means of tenons to base and cornice. Visible traces of different layers of plaster are visible on the *stūpa*, although it is not possible to establish exactly whether the layers date back to the period during which the *stūpa* was erected. In some areas of the plaster layers, in the panels placed between the columns and the quadriglyphs, pictorial decorations depicting a single subject have surfaced: an open lotus flower, alternately blue and red, against a white background. The pictorial decorations were probably surrounded by gilded architectural elements, which framed them. This *stūpa*, like oth-

er monuments of the same period, was later repeatedly damaged and subsequently restored (Faccenna, 1980, part 2, pp. 250-255). The gilded bracket that is the subject of this article, together with the Corinthian capital of a pillar (Inv. n. 595) “come from the core of a restoration carried out against the upper part of [the *stūpa*] no. 17, on the N side, in correspondence with the 6th and the 7th quadriglyphs”. (Faccenna, 1980, part 3, p. 721, note 1; for a detailed description of the quadriglyphs and the dentil and bar motif of the *stūpa* n. 17 see Faccenna, 2007, pp. 175-179).

Faccenna (2007, p. 168) points out the importance of the evolution of the Sacred Area during the GSt.3 Period, when the architectural structure of the site underwent significant changes. During that period, the Great Stūpa though maintaining its traditional circular plant, presents several levels which divide its cylindrical basis. The last, highest level, which can be accessed through a series of steps, is protected by a railing. Along a South-North axis, the circular Great Stūpa acts as a counterpoint to the coeval quadrangular-based monastery (Great Vihāra n. 57), which at the time of the excavations had been referred to as the Great Building (GB.). In between these two principal buildings there is a quadrangular-shaped space

Fig. 2
Gilded bracket:
detail of the red bole.
Butkara I (Swāt Valley,
Mingora, Pakistan),
1st – 2nd century A.D.
Schist with traces of
gilding, 11,7 × 19,8 cm.
MAO, Inv. n. Iap/151.
Courtesy Fondazione
Torino Musei.



flanked on its two shorter sides by stairways which in the past granted access on one side to the Great Stūpa (Gst.3) and on the other to the Great Vihāra n. 57. Near Gst.3 – along a line which touches on it along a west-east running parallel to the facade of the Great Vihāra n. 57 – are found a series of buildings going back to the same period (*stūpas* n. 27, 17, 14, column n. 33 and pedestal n. 135). As stated by Faccenna and Salomon (2007, pp. 113), the *stūpas* n. 17 and n. 27, separated by column n. 33, the *stūpa* n. 14 and the pillar on the pedestal n. 135, together with the Great Vihāra n. 57, are built using precious materials such as talc schist and chlorite schist, presenting moreover rich decorations making use of colours and gilding. The importance of *stūpa* n. 17, already noted by Giuseppe Tucci (1978, pp. 60, 63-66), is described by Faccenna in his earliest publications about the Butkara I excavations, in which he stresses the importance of the gilding found in these types of buildings:

Stūpas 14 and 17 are the best preserved, and from them we can have an idea of the quality of their decoration, since this is still *in situ*, and since the green schist of which it is made is as good as new in those areas sealed up by the walls of buildings that were made later to lean up against it. The sides were parted by fluted Corinthian half-columns with pilasters at the corners. The upper cornice was made up of fillets, ovoli and kymation, and was decorated with lion protomes or alternately with full curly manes in glory, stylised lilies, eagles, cupidis on lotus-flowers. On stūpa 17 a square upper storey is also preserved, slightly smaller, decorated with quadriglyphs between the lower and upper cornices. In the spaces between the half-columns and the quadriglyphs, the side of the wall was painted with large open lotus flowers, alternately red and blue: these are preserved on the south wall. All the architectural features, made of schist, together with the dome, likewise built of schist blocks, were gilt. We can now only surmise the rich splendour of these monuments in a lavish yet refined taste.

(Faccenna, 1964, p. 44)

As to dating the bracket, a comparison between the successive transformations of the Great Stūpa and the monuments inside the Sacred Area, with their respective floor levels and stratigraphic sequence, together with the studies of the numismatic finds that had been unearthed, attribute the construction of the *stūpa* n. 17 to Period 3, corresponding to the third stage of the Great Stūpa (Gst. 3) and to floor level F4 (fig. 5). In the reports about the campaign at Butkara I, Faccenna (1980, part I, p. 173) attributes Period 3, F4/F3 to the 1st-3rd century A.D. In particular, he attributes to floor level F4 the period between the end of the 1st century B.C./beginning of the 1st century A.D. and the beginning of the 2nd century A.D. Later studies by the same scholar, in which he compares some decorative elements from the site at Saidu Sharif I, Paṅṛ I (Swāt Valley) and Dharmarājika (Taxila) with the stylistic and architectural evolution witnessed at Butkara I, date *stūpa* n. 17 of Butkara I, together with *stūpas* n. 14 and n. 27, to the first quarter of the first century A.D., that is during the pre-Kuṣāṇa, i.e. the Indo-Parthian period. In particular, in his study on two fragments of a bracket from the site of

Dharmarājika (Taxila), Faccenna identifies close affinities – both in relation to the kind of material (chlorite schist) and to the processing technique used – with the artworks of Swāt Valley, which during the period was probably the principal centre of artistic production. Moreover, the two brackets present decorative elements very similar to those present on *stūpas* n. 14 and n. 17 of Butkara I, dated about 20 A.D. (Faccenna, 2001, pp. 141-145, 166; 2005, pp. 94-95). As far as the dating of the numismatic findings and their relation with the GSt.3 is concerned, floor level F4, Faccenna (2007, pp. 168-170) pays particular attention on some coins found in different parts of the sacred area, including an excellently preserved Azes II tetradrachm (n. 5229) discovered in one of the two relic-caskets inside the plinth of column n. 135, which in precedent studies had been defined by the same scholar “a guide to chronology” (1980, part 1, p. 57). As reported by Fabrègues (1987, pp. 34-35), on the basis of the stratigraphic layout of the site it is possible to determine that the *stūpas* n. 14 and n. 17 are coeval with or immediately successive of column n. 135, built during the GSt.3 Period. Although it is difficult to date the Indo-Scythian reign of Azes II with precision, on the bases of some inscriptions it is possible to put the end of Azes II’s reign before 20 A.D., the year in which it was replaced by the Indo-Parthian dynasty. The gilded bracket, together with the other sculptural Gandharan finds unearthed by the Butkara I excavations and intended for the city of Turin, became part of the holdings of the then Museo Civico in 1963, following the *Sculture buddiste dello Swat* exhibition that was held that same year at the Galleria d’Arte Moderna. In 1989 the Gandharan finds were allocated to the new Museo di Numismatica, Etnografia e Arti Orientali. When the Mu-

Fig. 4
Stūpa n. 17: Northeast side, 1st and 2nd storey.
 Butkara I (Swāt Valley, Mingora, Pakistan).
 Published in Faccenna D., 1980, *Butkara I (Swat, Pakistan) 1956-1962*, IsMEO Reports and Memories, Roma, part 5.1, pl. 145.a.
 Courtesy IsMEO Italian Archaeological Mission in Pakistan.



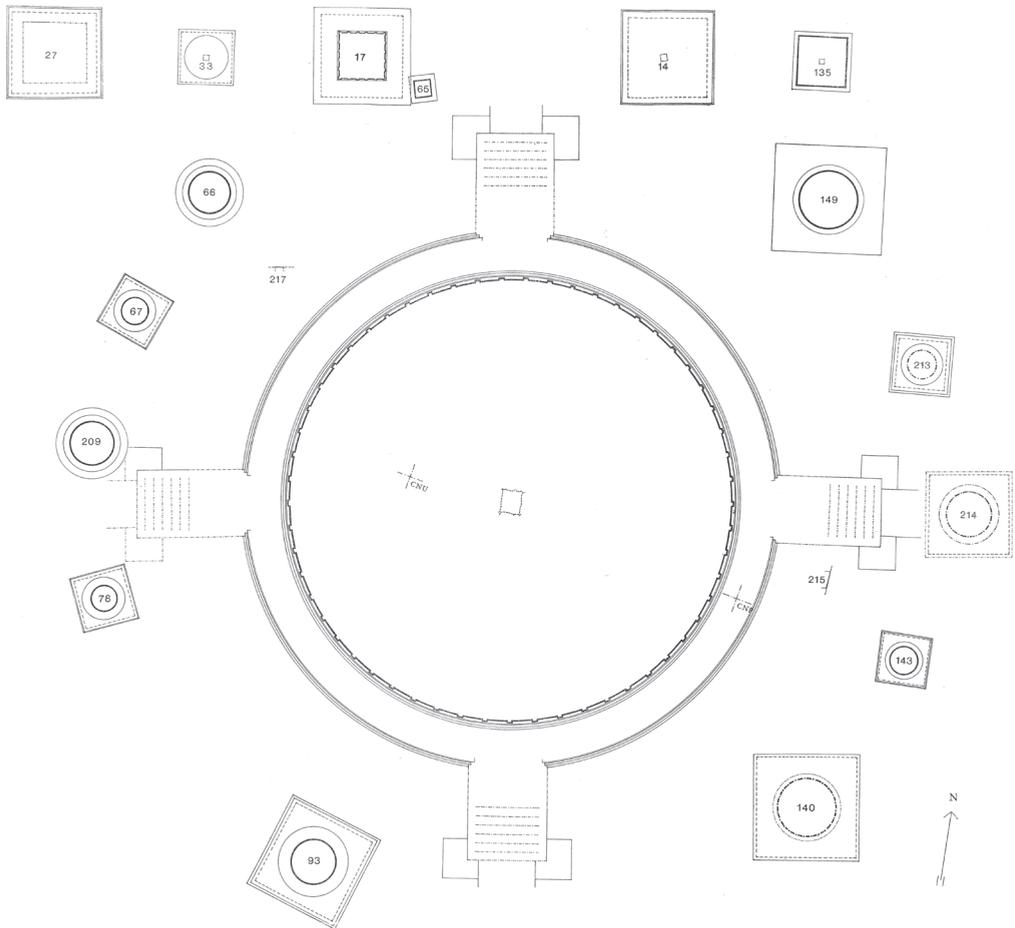


Fig. 5
Reconstruction sketch of GST. 3,
F4, with *stūpa* n. 17 and
surrounding monuments.
Butkara I (Swāt Valley,
Mingora, Pakistan).
Published in Faccenna, 1980,
part 3, pl. VIII.
Courtesy IsMEO Italian
Archaeological Mission in
Pakistan.

seum was closed down in 2001, the finds were allocated to the collections of the Museo Civico d'Arte Antica, Palazzo Madama. More recently, since the opening of the MAO Museo d'Arte Orientale in December 2008, the bracket has been on display in the Gandhāran Art Room as part of the permanent exhibition of South Asian and Southeast Asian Collections. The finds have a long history of museum exhibition and have been held by several institutions, however no written records exist about its past conservation and restoration interventions. The MAO Museo d'Arte Orientale has simply cleaned its surface with soft brushes, without intervening on the calcareous concretions.

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