

Chapter 12

Deterioration and Conservation of Wall Paintings in Uzbekistan



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Abstract Uzbekistan lies at the heart of Asia where the western flanks of the great mountain massifs of the Tien Shan and the Pamirs meet the vast steppes and deserts. Watered by the lengthy inland river systems of the Amu Darya, the Syr Darya (the Oxus and Jaxartes of antiquity) and the Zarafshan, all fed by the melt from mountain snows and glaciers, its croplands, orchards and pastures nurtured the development of important centres of civilization. The nation's extremely rich and ancient history provides valuable insights regarding the general processes of mankind's social and cultural development, as well as those specific to the unique cultures of the region with multiple archaeological sites. The most important issue confronting conservation professionals in Uzbekistan is the preservation of wall paintings found at archaeological sites. Their conservation will allow us not only to preserve these unique samples of ancient material culture and art, but also to study the working methods of ancient artists and craftsmen, and the composition of their original materials. This will help to determine the unique features that characterize artistic development in antiquity in the territory of Uzbekistan. This paper provides an overview of general developments in conservation and restoration practices of wall paintings, and proposes future research directions. It also describes developments in training in the conservation of wall paintings being carried out in the State Museum of the History of Uzbekistan with colleagues from Japan and the USA.

Keywords Uzbekistan · Wall paintings · Conservation · Restoration · Cultural heritage · Training

12.1 Introduction

The preservation of wall paintings at archaeological sites in Uzbekistan has been carried out by specialists from various fields, such as artists, archaeologists and sometimes chemists. However, most of this work was episodic in nature, since it was

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done in connection with certain unique archaeological discoveries. Remedial treatments have mainly relied on the use of the widely accepted consolidation polymer, polybutyl methacrylate (PBMA), which was introduced into treatment practice in the 1940s (Fig. 12.1).

In the second half of the twentieth century, PBMA found wide application in the post-Soviet Union States, in particular in Central Asian countries, in the conservation of archeological paintings on earthen supports, as well as of other types of murals [1]. PBMA was chosen because of its good solubility parameters in a wide range of solvents, its workability in different concentrations, and its perceived ability to be used without causing colour changes in original materials. It has therefore been used to perform deep impregnation and consolidation of wall paintings so that they could be detached and removed from excavation sites, or, alternatively, it facilitated their conservation in situ. PBMA was introduced into the region in 1949 by P. I. Kostrov, an employee of the State Hermitage Museum [2]. Over the following decades, it became the standard material used in archaeological conservation.

After Uzbekistan became an independent state in 1991, exchanges intensified in the protection and preservation of the country's unique tangible and intangible cultural heritage. In the study and preservation of wall paintings, the restoration department of the Institute of Archeology of the Academy of Science of the Republic of Uzbekistan plays an important role. For many years, in collaboration with foreign colleagues, it has been responsible for carrying out major conservation-restoration



Fig. 12.1 Major archeological sites located in the territory of Uzbekistan

works. Special mention should be made of the head of the department, M. A. Reutova, who was principally responsible for the preservation of wall paintings from Afrasiab, Balaliktep, Karatepa and other sites. Advances in equipment and techniques, and the sharing of knowledge and experience, have been promoted by international cooperation.

12.2 Discovery of the Wall Paintings

12.2.1 *Balalyktepa*

Archaeological research in different territories of the Republic of Uzbekistan resulted in the discovery of many monuments that preserved painting on earthen supports. A majority of these were found in the region of Surkhandarya, in the southern part of Uzbekistan. Among the discoveries, the wall painting found at the site of Balalyktepa (Angor district) by L. I. Al'baum in 1953–1954, which dates from the end of the fifth and the beginning of the sixth centuries AD, is extremely interesting in terms of its artistic conception, content and technical proficiency [3].

The painting depicts a feast scene in which men and women sit on rugs (Fig. 12.2). The composition can be divided into separate figure-groups. In the foreground are large figures dressed in richly ornamented clothes, who delicately hold cups and bowls by their fingertips. In the background, servants are shown in a smaller scale. Judging by their clothes, both men and women servants are present, and most of

Fig. 12.2. Fragment of wall painting from Babayktepa in the Surkhandarya region



them hold a fan. Behind the figures, a wall is depicted on which are hung rectangular, square and round objects in white, some decorated with traces of drawings. At the top of the composition, under the eaves and at the level of the servants' heads, multi-colored circles are depicted in different sizes and distances from each other. Undulating coloured ribbons with bells are attached to the center of these circles. This description provides only a general overview of the painting, which belies the detail and interest of a composition that preserves some 47 figures, arranged in distinct groupings.

12.2.2 *Afrasiab*

The early medieval paintings at Afrasiab at the ancient site of Samarkand are well known to specialists, but as is often the case, general knowledge of them is lacking. The first wall painting at the site was discovered by the historian and regional expert, N. Viatkin, in 1913 [4], but the main body of paintings was found only in 1965–1967, when they were investigated by L. Al'baum [5] (Fig. 12.3). Discovered by chance in the course of road building, they are unique in many respects. The paintings were found on the walls of a domestic building, probably a kind of palace, and their subject matter is secular. The themes include hunting, crossing a river and a solemn procession, but the principal scene is the arrival of emissaries of various countries at the court of Varkhuman, the ruler of Sogdia (Fig. 12.4). In it, the inhabitants of various Asian regions, namely Sogdians, Turks, Iranians, Chinese, Koreans, and envoys of mountain tribes wearing their ceremonial dresses, are shown side by side. This true-to-life scene has immense documentary and ethnographic importance, providing unique knowledge of socio-political interactions in early-medieval Central Asia. Moreover, the scheme is the only figurative one known with an inscription, which enables it to be dated to the second third of the seventh century AD. One of the chief features of this Sogdian inscription is that it contains the address of the Chaganian

Fig. 12.3 The scholar L. Al'baum explains the early medieval wall paintings discovered at Afrasiab, Samarkand





Fig. 12.4 Detail of the wall painting from Afrasiab showing part of a great procession

ambassador to Varkhuman, the ruler of Samarkand, in 655, which is confirmed by Chinese sources. These wall paintings are not the only type of their kind. The early-medieval paintings at Balalyktepa, Varakhsha and Penjikent were already known and are similar. However, the Afrasiab paintings are nonetheless unique [6].

12.2.3 *Karatepa*

Excavations of a large religious centre at Karatepa, near Termez, a “re-transmitter” of Buddhism to Central Asia, China, Korea and Japan, revealed a site that can be regarded as having made a major contribution to artistic and spiritual culture. Archeologists of Uzbekistan together with Japanese researchers studied the monumental complex, which can be dated to the first–fourth centuries AD. Its cultic buildings are remarkable not only for their size, but also for their innovative architectural and construction concepts, and the richness and elegance of their interior decoration. The walls of the monastic rooms were decorated with colourful paintings and furnished with clay-based sculptures. The paintings contain scenes and characters from the Buddhist world, including depictions of the Buddha, bodhisattvas, ascetics, monks and mythical birds and animals. Paintings of secular persons, who are represented in dynamic and very expressive styles, are no less interesting. Discovered objects from the site testify to the highly developed nature of the original culture of ancient Bactria, which had much in common with Gandhara-Buddhist and Greek-Roman art. Each object discovered at Karatepa has unique value, demonstrating that in the

first–fourth centuries AD, the highest class of artists lived and worked in the territory of Termez. Their artistry delights viewers even after the passing of thousands of years.

In order to clarify the architectural development of the western half of the monastic complex, archaeological research was begun in 2016. During excavations in one of the rooms, a colourful wall painting scheme was discovered [7] (Fig. 12.5). The plan of the complex has not yet been precisely determined, but based on investigations carried out to date, there was a principal hall of at least 25 m in length. Painting was found on the east and south walls of this hall, preserved to a height of more than 250 cm. Unfortunately, some areas were spoiled by the burrowing of termites and rodents, which means that certain details and some whole images cannot be accurately identified. Nevertheless, in comparison with other ancient wall paintings in Central Asia, those at Karatepa can be considered to survive in reasonably good size and condition. Prior to this discovery, the presence of wall paintings at Karatepa was only known from fragmentary remains. Only one painting, from the ground-level cave “B” in the area of the Southern Hill, showing an image of the Buddha and monks, was distinguished by its somewhat better preservation, but it was also small and fragmentary.

The hall to which the paintings belong is dated to the second–third centuries A.D. In this range, a later date for the painting is confirmed by coin finds. When the hall was destroyed, debris from its ceiling and upper walls was used in the construction of a nearby dam, in which was discovered two minted coins, from the period of Kanishka III. According to most researchers, the circulation time of these coins belongs to the second half of the third century AD.

We hope that further investigation of the great hall at Karatepa will reveal more wall paintings that help expand our knowledge of the rich and diverse artistic culture of Bactria in the Kushan era, which certainly holds a worthy place in the history of the culture of world civilization.



Fig. 12.5 Fragments of wall painting from the southern part of the northern hill of the Buddhist temple of Karatepa

12.2.4 Tavka

Archaeological excavations in the territory of early-medieval Tokharistan have yielded the richest material for characterizing its unique artistic culture. The principal archaeological resource relates to local Buddhist art, but one important archaeological find sheds light on secular artistic practice. This is a wall painting from the fortress of Tavka, which acted as a customs house in the fortification system of Nonidakhon, located to the south of the Iron Gate, close to the exit from the valley of the Sherabad Darya, Sogd. The painting was first discovered by E. Rtveladze in 1987, and subsequent excavations were made at the site from 1989 to 1993 by Sh. Rahmonov. Although news of the wall painting discovery spread at once, its official scientific publication did not occur for another ten years. Eventually, first in an article written by Sh. Rahmonov and M. Reutova, and then in a monograph written by Sh. Rahmonov, the archaeological findings of this interesting monument were published. Some fragments of the wall painting are now on exhibition in the Termez Regional Archaeological Museum, providing important information on the function of the fortress and the nature of its original decoration.

The excavations at Tavka enriched archaeological knowledge of Tokharistan, as well as confronting scholars with some important questions. These firstly relate to the attribution of the monument and its wall painting. Previous identifications of the fortress as a Manichean temple seem not to be correct, as these were made on the basis of very scant evidence. Instead, as a site with natural defensive features, it was an ideal choice for the location of a fortress, in which a director of customs had a residence. The daily needs of a director of customs in both work and life led to a separation of decoration and function in his house. Thus, on the ground floor there were two depots, while on the first floor there were an entrance hall, living room and ceremonial hall. Two schemes of painting covered the walls of the ceremonial hall, which were discovered by the restorer, M. Reutova. The painting techniques used are traditional for Central Asia. The first scheme, of ornamental motifs, was preserved in fragmentary condition. This was subsequently limewashed over and a second scheme painted, showing scenes of hunting and feasting, which appear to be from a wedding ceremony.

The lower tier of painting presents a dynamic scene of galloping horsemen engaged in hunting gazelle (known locally as 'jeiran'). The horsemen are shown with bows and arrows shooting at animals in front and behind; the horses' harnesses are richly decorated with gold. In the upper tier, a scene of feasting complements the hunting scene. Over twenty noble personages, both men and women, participate in the celebration. Unfortunately, the composition only survives in a fragmentary condition. Probably, like the wall painting at Balalyktepa, the figures were arranged in couples positioned opposite each other. They are turned three-quarters towards the viewer, and their attention was most likely focused on an old woman, shown fastening a necklace around the bride's neck. The necklace consists of a strand of beads and cross-shaped pendants. A similar necklace is worn by the old woman

herself and by other women at the feast. This important scene occupied the central section of the composition.

A number of figures in the painting wear traditional robes distinguished by triangular lapels on the right of their garments. The women wear silk mantles over their robes, and beneath these, their dresses have close-fitting well-rounded collars. Originally they were probably each shown holding a large white flower on a long stem over their shoulders. The men wear turbans rolled up around their caps. The headgear worn by the female figures is more varied, but it is consistently in the style of a turban. With this information, it can be conjectured that the participants are noble Tokharistans at an Islamic wedding ceremony.

12.2.5 Kazakly-Yatkan

Currently, the oldest example of wall painting from ancient Khorezm is a mural fragment showing a beardless youth drawing a bowstring. It was discovered during the excavation of an observatory-temple in Koi-krylgan-kala, and is dated to the fourth-third centuries BC. A wealth of sculpture and wall painting of the second half of the second and third centuries AD was discovered by scientists during the previously mentioned excavations in Toprak-kala, the residence of Khorezmian shakhs. In subsequent years, they discovered wall painting fragments showing decorative motifs in Kaparas temple in Southern Khorezm, and figurative fragments in the temple complex, Kalalygyr-2, in the Sarykamysh delta of Amudarya, dating to the fourth-second centuries BC.

A real breakthrough in the study of this most ancient period in the art history of Khorezm, and, perhaps, of the entire region of Central Asia, occurred as a result of the work of an international research group of scientists, under the auspices of the Karakalpak-Australian archaeological field team. This group carries out systematic studies of the ancient Tashkyrman oasis, situated in the Beruni District of the Republic of Karakalpakstan. The primary object of the fieldwork is an ancient settlement site discovered in 1956 and known to academics as Kazakly-yatkan. Local people use another, perhaps more ancient name for this monument—Akshahan-kala. Excavations that commenced in 1995 and are still ongoing have enabled scientists to establish that this was the largest settlement site of ancient Khorezm and to make an assumption that it was the capital of Khorezm after its secession from the Akhemenid Empire.

Since 2004 the main effort of the field team has focused on studying a palace-and-temple compound in the so-called “sacred city” of Kazakly-yatkan. The north-western section of the “sacred city” was occupied by a group of buildings which, as the excavation results have shown, used to be the temple-palace compound [8].

The first indications of ancient painting in the temple came with discoveries made as early as 2004–2005. Later on, when the field team was joined by restoration experts, it became possible to begin large-scale clearance, conservation and scientific study of the discovered monuments of ancient art.

Traces of wall painting were found both inside the temple, and on the walls of a gallery that surrounded the temple along its outer perimeter, as well as on the walls of the palace. Up to now a portion of corridor about 60 m in length has been fully uncovered along the western side of the temple, revealing considerable wall painting. The total length of the corridor is about 250 m, which gives us hope for new discoveries. In the southern half of the corridor the already revealed painting shows people on foot, a mounted procession and, probably, horse riders.

12.3 Conservation Training for Preservation of Cultural Heritage

Material cultural heritage is the legacy of physical artifacts that are inherited from past generations, maintained in the present, and bestowed for the benefit of future generations. Understanding is the first step in the process of learning to protect and manage our cultural heritage well. Uzbekistan has an immense cultural heritage in need of proper documentation, recording and assessment. Well-prepared information is required to enable allow site managers and local authorities to make better and informed decisions.

In this context, special mention should be made of the work of experts from the Japan Foundation, the Ikuo Hirayama Foundation, Asia Cooperation on Conservation Science (ACCU), the Nara National Research Institute for Cultural Properties (NABUNKEN), the National Research Institute for Cultural Properties, Tokyo (TOBUNKEN) and other organizations that have carried out training in the study and preservation of cultural heritage in Uzbekistan. One of the most important training projects so far was the “ACCU Workshop on Cultural Heritage Protection in the Asia-Pacific Region 2008”. This six-day workshop was organized by ACCU Nara in October 2008, in cooperation with the UNESCO office in Tashkent. Its main theme was documentation, principally measured drawing and imaging of archaeological artifacts.

From 2011 to 2013, The Japan Foundation carried out a key project titled “Human Resources Development and Technical Transfer for the Protection of the Culture Heritage (Uzbekistan)”. A workshop held as part of the project provided training in the theory and practical techniques in the conservation and restoration of clay statues, aimed at practitioners in the field of cultural heritage in Uzbekistan. The workshop coordinators were Prof. Aoki Shigeo and Dr. Furusho Hiroaki (Fig. 12.6). The principal aims were: research and restoration of clay objects found during excavation of the ancient settlement of Fayaztep and stored in the State Museum of History of Uzbekistan, as well as training of specialists and technology transfer; study of the materials and techniques for creating clay objects found in the Republic of Uzbekistan and stored in the Museum of History; and improving qualifications of specialists in the field of preservation in Uzbekistan, including technology transfer and exchange of professional knowledge.



Fig. 12.6 Professor AOKI Shigeo teaching at a workshop in the conservation of clay-based statues at the State Museum of History of Uzbekistan

During this collaboration, Dr. Hayakawa Yasuhiro carried out XRF spectrometry analysis of three fragments of gilded and colored statues, as well as of fragments of wall painting from the collection of the State Museum of History of Uzbekistan [9]. The three sculpture fragments belong to the body, the left hand and part of the face of what is thought to be a statue from the Buddhist temple of Fayaztepa (second–third century AD, Surkhandarya region). A colored wall painting fragment, possibly excavated from the ruins at Afrasiab (Samarkand, seventh–eighth century AD), was one of those selected for analysis. It shows a head, which is the only surviving part of an almost life-size painting of a warrior, thought to be a stylized depiction of a Sogdian man of the seventh–eighth century AD. His face is conspicuously white, while his finely delineated eyes and mouth are enlivened by subtle gradations of red. His helmet, which is painted in a vivid blue, is also very impressive. Another fragment of wall painting selected for analysis was excavated from the Varahsha ruins (Bukhara, sixth–seventh century AD). This shows a panther-hunting scene, in which the hunter is depicted on the back of a white elephant. It is one of the most famous exhibits in the collection of the State Museum of History of Uzbekistan. The part of the painting that was analyzed shows a procession of partridges. The XRF analysis obtained useful information about the original coloring materials of the statues and wall paintings.

The “Cultural Training Partnership for Artifact Conservation” is a three-year program of capacity building and advanced training for Artifact Conservators’ from the national museums of the five Central Asian republics—Kazakhstan, Kyrgyzstan,



Fig. 12.7 Workshop of the ‘Cultural Training Partnership for Artifact Conservation’ for conservators from the five Central Asian Republics, instructed by Fabio Colombo

Tajikistan, Turkmenistan, and Uzbekistan—funded with the support of the US Department of State through the US Embassy in Tashkent. Starting in 2018, the Oriental Institute (OI) of the University of Chicago, working in partnership with the State Museum for the History of Uzbekistan (SMHU), organized a series of three annual intensive two-week training workshops for 16 conservators from the national museums of the Central Asian republics and provincial museums in Uzbekistan. Teaching is delivered by conservation experts from leading international centers.

The workshop coordinators are Prof. Gil Stein and Mr. Fabio Colombo, who also serves as the head of field conservation for the University of Chicago’s Cultural Heritage Preservation projects in Afghanistan. Mr. Colombo was the instructor for the first workshop held in 2018 (Fig. 12.7). The topics covered in each workshop are designed to provide training in internationally recognized standards and practices of treatment for the main classes of artifact types, and with respect to their principal constituent materials, that form the majority of the holdings in the national museums of the Central Asian republics. This is the first systematic program that brings together heritage preservation specialists from the national museums of the Central Asian republics for training, in order to develop a shared set of standardized best practices for conservation of museum objects. It is intended as a first step in building connections among the National Museums of these five countries, to encourage institutional cooperation in cultural heritage management.

The first workshop took place at the State Museum for the History of Uzbekistan from 3rd to 15th September, 2018.

Topics covered included:

- a. an overview of theoretical approaches to conservation;

- b. a review of the main aspects of applied science that underpin conservation;
- c. stabilization of objects;
- d. applied practical training in conservation methods, with a focus on wall paintings.

In approaching the conservation of any given object or material, there is almost always a range of potential treatment strategies. For this reason, in addition to instruction in specific techniques, the workshop focused on teaching how to evaluate objects and materials, and how to decide which specific treatments are most appropriate to employ in any given case.

It cannot be emphasized enough that the conservation of cultural heritage artifacts is both an important and complex undertaking. Collaborative conservation programs should be seen as essential steps in a longer-term commitment to capacity building for cultural heritage preservation in the countries of Asia. Certainly, such collaborations are necessary in helping to preserve and safeguard the tangible cultural heritage of Uzbekistan. Of particular importance is the strengthening of site management and conservation practices, to ensure the promotion and transmission of this cultural heritage to the next generation.

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