

The Preservation and Conservation Planning of Textiles at the Tokyo National Museum

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Introduction

I became a researcher at Tokyo National Museum in 2002 after working as a curator at Nara Prefectural Museum of Art. I specialize in the history of Japanese and Asian textiles. Tokyo National Museum is probably one of the few museums in Japan that has a permanent display of textile artifacts. I am constantly involved in this display. Today, I would like to speak to you briefly about the preservation and conservation planning of textile artifacts at Tokyo National Museum in reference to my daily tasks, issues I face, and future visions.

I would like to briefly introduce the collection of antiquities, exhibition facilities and storage at Tokyo National Museum, also commonly referred to by its shortened name, Tōhaku.

The Gallery of Horyuji Treasures

Tōhaku has a total of seven galleries that exhibit textile artifacts. One of these is the Gallery of Horyuji Treasures (Fig. 1), which houses various treasures that were donated to the Imperial Household by Horyuji Temple (est. 607) in 1878, including textiles that were used in ritual services held at Horyuji, flag-like textiles called *ban* that were used to decorate the temple halls, floor coverings and ceremonial fabrics.

The fact that these artifacts were used in Horyuji means they were used some 1300 years ago. Therefore, they are mostly textile fragments that retain none of their beautiful appearance as you may imagine. However, we must consider how best we can leave these fragments to the next generation. As Tokyo National Museum is primarily an exhibition facility, artifacts are conserved in consideration of how they will be exhibited, based on the premise that they are capable of being exhibited. In simple terms, this is the museum's priority policy, and the textile artifacts in the Gallery of Horyuji Treasures are also conserved based on this policy.

This is the room in the Gallery of Horyuji Treasures for textile artifacts (Fig. 2). The artifacts are normally displayed as shown here. At a glance, you may receive the impression that numerous long, narrow strips of fabric are lined up. These are a type of flag called *ban* that used to be hung on pillars inside temple halls. The lower part of the *ban* has been beautifully conserved. There are presently two such display cases in the Gallery of Horyuji Treasures, and the artifacts that are exhibited in them are replaced every month.

In the case of ancient textile artifacts, their colors will gradually fade the longer they are exhibited. For this reason, artifacts in the Gallery of Horyuji Treasures are returned to the repository for two

years after being exhibited for a month, as a rule. The exhibits are replaced every month, and the same artifacts are brought back out for display after two years. If you visit Tokyo National Museum every month, you will be able to view almost the entire collection of textiles among the Horyuji Treasures that are capable of being exhibited.

This is the repository in the Gallery of Horyuji Treasures (no figure). The gallery was constructed in 1999 and is a relatively new building among the buildings of Tokyo National Museum. The repository in the gallery has been made specifically for the storage of textile artifacts, so it is designed to precisely accommodate the textile in the gallery. Each artifact is placed on a board and stored in a large, flat drawer. This is probably the most salient feature of the repository. The drawers are extremely long and large. This structure was adopted, because the textile in the Gallery of Horyuji Treasures cannot be stored in a folded form. The drawers have a depth of more than one meter so that the boards on which each textile is placed can be stored flat. This is the characteristic of the repository in the Gallery of Horyuji Treasures.

Honkan (main building)

Next, I wish to talk about the Honkan (Fig. 3). The Honkan holds two categories of exhibitions. Thematic exhibitions in various genres of art are held on the first floor. The second floor features an exhibition that traces the history of Japanese art through the display of actual artifacts that represent each period in time. This exhibition has four rooms for textile artifacts.

The first room, Room 6, is themed on the culture of the military elite (Fig. 4). Exhibited here are mainly armors, helmets, swords, spears, and horse saddles. In line with this theme, the textiles exhibited here are mainly costumes that were used by warlords generally from the Warring States Period to the Edo Period (16th-19th century). Fig. 4 shows an inner wear called *yoroi-shitagai* that was worn under an armor, on the right, and a *jinbaori* surcoat, on the left. Legend has it that they were owned by the prominent feudal lord and tea master Kobori Enshu (1579-1647).

The second room, Room 8, displays Edo craftworks (Fig. 5), including not only textiles, but also various metal crafts, lacquer crafts and ceramics of the Edo Period (1603-1868). As opposed to the display of mainly men's textile articles in Room 6, displayed here are mainly articles that were worn by women in elite military households, such as *uchikake* coats, *katabira* summer garments, and *hitoe* kimonos.

Straight down the hall is Room 9, arranged in the form of a stage (Fig. 6). The items displayed here are mainly *noh* theater costumes, which can be said to be one of the most important collections of the Tokyo National Museum. Titled "Noh and Kabuki," the exhibition features *noh* costumes four times a year, *kabuki* theater costumes once a year, and *bugaku* dance and music costumes once a year. The exhibits in all of the exhibition rooms in the Honkan are replaced six times per year.

The room is set up in the image of a *noh* stage, although it is not a real *noh* stage. The walls are all

black. These display cases were made in consultation with a designer, so that the splendid glitter of the gold threads of the *noh* costumes stand out. Visitors can feast their eyes on the costumes as though they are viewing a stage.

The fourth room is Room 10, featuring various articles on costume (Fig. 7). *Ukiyo-e* prints are displayed along the wall on the right-hand side. The *ukiyo-e* prints are displayed here so that visitors can compare various costumes on display on the left-hand side of the room with the prints depicting beautiful women and imagine how kimonos were worn by women in the Edo Period.

These four rooms in the Honkan exhibit cultural property textiles, and the exhibits are completely replaced every two months. The lighting in the rooms ranges from roughly 80 to 100 lux.

There have been arguments about whether it is a good or bad idea to replace exhibits so frequently. This is because in countries other than Japan, such as in Europe and the United States, there are museums that replace their textile exhibits only once a year. In some museums, the same artifacts are exhibited a whole year round and stored in the repository for the next ten years. Additionally, as we have a shortage of researchers, it is extremely difficult for me to engage in the replacement work six times a year almost entirely by myself. More importantly, however, the question is whether it is good or bad for the artifacts to be repeatedly exhibited and stored so frequently.

This has been the traditional method of exhibiting artifacts in Japan, because the designs and materials of textiles, in particular, embody a sense of the season. In this regard, the idea of exhibiting the same artifacts throughout the year is hardly acceptable to people who have a deep knowledge of traditional Japanese culture. As matters stand at present, paintings are replaced once every one-and-a-half months at Tōhaku, but textile artifacts in the Honkan are replaced once every two months so that the exhibits reflect the four seasons.

Next, I would like to discuss how artifacts exhibited in the Honkan are stored. This is the repository for textile artifacts (no figure). It is presently composed of two tiers and is fully fitted with drawers. I think it was made based on the *wadansu*, which is a highly traditional Japanese-style chest of drawers. We have 157 such chests, with the top and bottom tiers combined.

On the second floor, the repository has gaps in the floor. This is to improve the circulation of air. The inner structure of the chests is designed based on the traditional Japanese-style chest, so naturally, artifacts must be folded to be stored. Kimonos are folded in the traditional way and are now kept in a very simplified version of a wrapping called *tato* made in the museum. This *tato* is made of plain weave silk *habutae*. A neutral paper board is placed on the *habutae* to form the base, and the *habutae* is lightly folded over the artifact. It is then tied with a string and stored.

Our museum fortunately has a Division of Conservation and Restoration. When a new material is selected for use, the division tests them to make sure they do not have an adverse impact on cultural properties. It also examines materials that are outsourced to make sure they do not emit strange gases. The *habutae* has also been tested by this division, and only that which has passed its examination is

used for wrapping.

However, as you can see by looking into the drawers of this case, we cannot store textiles in chests of this width without stacking them on top of each other. This is the reality. Textiles are therefore stored generally in stacks of two in these chests.

Toyokan (Asian Gallery)

Now, let us take a look at the Toyokan, or Asian Gallery (Fig. 8). The Toyokan was built in 1968, 49 years ago and will celebrate its 50th anniversary in 2018. This gallery also has two exhibition rooms for textiles. One exhibits Chinese textiles, and the other exhibits Asian textiles, namely Indian textiles, Indonesian textiles, and the textiles of nomads in West Asia.

This is Room 5 in the Toyokan, which exhibits Chinese textiles (Fig. 9). The Toyokan was renovated in 2013 for seismic retrofitting. The display cases and lighting were also renewed, and the display environment is therefore extremely good. Chinese textiles are exhibited horizontally in a large, flat display case.

However, this room has issues. That is, the lighting is extremely uneven. The drawback to exhibit textiles here is that they cannot be evenly illuminated. Yet, if they are not illuminated well, their colors and techniques cannot be appreciated. One of the most beautiful aspects of textiles, and particularly that of ancient textiles, is their colors dyed with natural dyes. These cannot be fully be appreciated in dim lighting.

The Toyokan was renovated at a time when LED lighting had just come in to use. Unfortunately, LED was not adopted for the window frame lighting in the Toyokan, although LED is most suited to museum exhibits. Furthermore, the lighting is conspicuously uneven due to various design errors. This fiscal year, we have begun improvements such as installing motion detectors so that the lighting brightens when a visitor approaches an exhibit case. This will contribute to reducing the amount of exposure.

The other exhibition room for textiles in the Toyokan is Room 13 (Fig. 10). This room is located in the basement of the Toyokan, so most visitors pass through the building without noticing. I hope you will drop by and see the textile room located at the far end of the basement of the Asian Gallery. Indonesian textiles are presently on display in this room. Most Asian textiles are characteristically rectangular in shape. Japanese kimonos are also made from a rectangular fabric, and garments in Asian countries are made to be worn by fitting the fabric around the body. Therefore they are exhibited in their flat, rectangular form. Before Toyokan Room 13 was renovated, flat textiles were exhibited by directly pinning them to the wall. This is and an inadequate method by anyone's standard. Thus, before renovating the room, we sought methods for somehow exhibiting the textiles without using pins. Ultimately, we decided to attach a pole sleeve to hang the textiles.

This room also has a lighting issue that stems from the hanging display method. Hanging produces

wrinkles in the textile, which create shadows. Our idea of lighting is to create a visual appearance that clearly illuminates the colors and designs of a textile without making shadows but this is difficult to achieve with our present facilities.

The Toyokan does not have a dedicated storage for textiles partly because the gallery only has a small number of textiles. The textile collection is held in the same storage as paintings, ceramic artifacts, books, and lacquerware.

These are textile shelves in the storage (no-figure). The storage holds paintings in the front and textiles towards the back. We had the Division of Conservation and Restoration make a flat box with archival paper, and we reluctantly store textiles folded in these boxes in several layers. We must store them in this manner due to the limited storage space, and also because the storage is not suitably designed for textiles. This shelf was originally made to hold square paulownia boxes for ceramic artifacts and is thus essentially not for storing textiles. In order to store the gallery's entire collection of textiles, this was the best way we could think of to eliminate unnecessary spaces as much as possible and store the textiles without causing undue stress. Five-centimeter-thick boxes made of archival paper are stored in stacks. If an artifact that is to be exhibited is stored toward the bottom of the stack, the boxes above it must be removed and then returned to the stack again, one by one. In this sense, it is in no way a convenient storage space.

Conservation of textiles

Since Tokyo National Museum is a museum that has a conservation and restoration division, you may think that we have facilities of the highest caliber. In reality, however, we have issues to store large quantities of artifacts in the limited space of our repository, and must manage them by seeking a compromise, even if the compromised solution is far from ideal. Thus, I would like to talk about how conservation is performed in such a situation.

At Tōhaku, there are three categories of conservation. The first is first-aid conservation. Earlier, I mentioned that conservation is performed on the premise of exhibiting an artifact, but first-aid conservation is one type of treatment within this scope. A display plan is first formulated, and the artifact to be exhibited is examined as to whether it can withstand being exhibited and whether it has been treated properly for display. For example, when an Asian textile does not have a pole sleeve for hanging, or if it is damaged, conservation is performed as a temporary measure.

The second type of conservation is in-house conservation. Textile that are kept in the Gallery of Horyūji Treasures is conserved within Tokyo National Museum mainly by conservation staff.

An example of emergency conservation is to attach a pole sleeve to a textile for display at Toyokan Room 13 (Fig. 11). To pass a rod, a pole sleeve is sewn on in a special manner that minimizes damage to the textile.

This type of work is performed as necessary, but unfortunately, there are no staff members at

Tōhaku who specialize in textile conservation. Therefore, when first-aid conservation is required, an outside conservator is requested to come to the museum.

If a textile has a hole and the surrounding fabric has become weak, a patch is applied. The patch is carefully sewn onto the fabric so that no burden is placed on the textile when it is suspended from the ceiling. This type of reinforcement is part of emergency conservation (Fig. 12).

I wish to introduce another specific example of emergency conservation. In the winter of 2017, an exhibition of Japanese arts will be held at Bangkok National Museum in Thailand. Thailand, as you know, is a Buddhist country. Therefore, our counterparts in Thailand requested mainly of artworks related to Buddhism. In response to this request, we decided to take a hanging scroll featuring a Kamakura-period embroidery of Buddha, called *shubutsu* (literally meaning “embroidered Buddha”), to Thailand. We selected this item because it appeared to be in good condition at a glance. However, upon closer examination, we found embroidery yarns floating in many places. Therefore, we worried that the hanging scroll would crease in these areas when rolled up, and that taking this overseas would be a problem.

We addressed this problem by fixing the floating yarns with an adhesive, and we also had the *jiku*, or roller rod, replaced with a new one because it was slightly worn (Fig. 13). Naturally, the rod is for rolling up the scroll, but the diameter of the rod is what essentially matters. If the scroll is rolled around the rod as it is, it would be tightly rolled, and this would cause stress on the scroll. Therefore, we are presently taking measures using a *futomaki* (a wooden cylinder is attached to the roller rod and the scroll is rolled around the thick cylinder to minimize the burden on the scroll). Such treatments for holding special exhibitions also fall under the scope of first-aid conservation.

The floating of the yarn can be clearly seen here (Fig. 14). The fabric is entirely covered with embroidery using a technique called *sashinui*. Fixing each of these countless yarns that have floated due to age is also part of textile conservation.

Next, I would like to briefly introduce the conservation of textiles in the Gallery of Horyuji Treasures. When the textile artifacts of Horyuji were first brought to our museum, they were simply a mess of fabrics in a large container. They were supposedly organized by placing a number of different types of fabrics between glass panels (Fig. 15). In the past, this was thought to be effective for preserving fabrics, but the glass panels are now being removed little by little, because the glasses have clouded over, fractured, or become compressive and display adverse conditions. Some of the textiles may retain their shape even when the glass panels are removed, but some may lose their shape as soon as the panels are gone. In fact, they may be reduced to powder. There are many such artifacts in the Gallery of Horyuji Treasures. To stop the textiles from disintegrating, we have traditionally applied an underlay using Japanese *washi* paper. This is no simple task, however. The warp and weft yarns that are on the verge of unraveling are patiently reassembled and stabilized using water and *washi* paper. Small fabrics are backed with Japanese *washi* paper, mounted, fitted with a window frame and stored

in this way (Fig. 16). This enlarged view shows how the yarns are split as though a crack has formed. An underlay has been applied after returning them as much as possible to their original form (Fig. 17).

In recent years, however, there are views that say this method is not preferable. This is because the method of applying an underlay uses water. Using water causes colors to fade, and color fading is extremely dangerous to textiles. We thus sought ways to conserve textiles without applying an underlay as much as possible.

As one solution, this low-pressure mount was developed (Fig 18). It has a window and an acrylic cover. The bottom portion is lined with cotton fabric and the inside has a cushioning material. The cushioning is carved out in the shape of the textile and covered with cotton fabric, and the textile is fitted inside the carved indentation. Pressing the artifact in place with an acrylic cover after carving out an indentation for the artifact helps minimize the pressure from the acrylic cover. As it provides a way treat artifacts without using water, we now employ this method wherever possible. With this other mount in which both the front and back sides of a textile could be seen, the underlay is only partially applied (Figs. 19, 20).

Full-scale conservation procedure at Tōhaku

The third type of conservation is full-scale conservation. A potential artifact for conservation is first selected. There are so many textile artifacts in need of conservation that it is impossible to prioritize them, and among them, only one artifact can be treated per year. We conserve Japanese textiles and Asian textiles alternately, by conserving a Japanese textile for one year and an Asian textile the following year.

We generally have a conservation budget of around 7 to 10 million yen—60 million yen this year to be exact—but this is in no way a large budget when considering that the museum houses a total of more than 1.1 million works of art, including countless numbers of artifacts that need conservation. Under this situation, conservation is performed by selecting an artifact that most urgently requires conservation in each category of art.

When an artifact to be conserved is selected, a rough estimate is requested from a conservation contractor, and a budget is allocated based on this estimate. For example, several million yen may be allocated to a certain category, several hundred thousand yen to another category, and so on.

Thereafter, the matter is presented to an Inspection Conference in which researchers of the museum gather and discuss whether the conservation proposal may be undertaken. After the conference, conservation contractors are invited to examine the artifact and submit a proposal.

Once all proposals have been submitted, the conservation specifications submitted by each contractor are compared to judge which is best and to select one contractor for the specific project. This is the job of the Selection Committee, which is composed of professors and other people of authority, and do not include museum staff.

The artifact is then handed over to the selected contractor, and conservation begins. To be more precise, various discussions are held at the beginning of April, and the artifact is generally handed over to the contractor between September and October.

This is a *kabuki* costume called *omigoromo* that is presently being conserved (Figs. 21, 22). At a glance, it appeared to be in excellent condition, but the collar portion was extremely heavy and was on the verge of tearing off. Furthermore, it is made of velvet, but the hairs of the velvet were mostly gone, and many lateral tears were evident. As it was an item that looked extremely glamorous and was expected to have a large display impact, we wished to conserve it and proposed its conservation in 2016. As per standard practice, we had conservation contractors submit a proposal, but the proposals were largely divided into two groups. One group proposed applying an underlay using paper, which was a method no longer in common use for textiles of the early modern or new era. The other group proposed a conventional method of applying a silk lining and sewing it together with the outer fabric of the textile to reinforce the textile.

I have never seen a relatively new artifact from the late Edo Period conserved by applying an underlay using paper, so I frankly wondered whether such method of conservation was acceptable and did not expect it would be selected. However, the Selection Committee normally holds discussions by looking only at the specifications and not the artifact itself. In other words, the professors and people of authority in the committee who ultimately decide on a conservator do so without seeing the actual artifact. In the final analysis, the committee selected the proposal to apply a paper underlay. I was extremely surprised, but under the present system, it was not possible to change the decision once a contract was selected by the committee. Thus, in the end, the method of applying an underlay was adopted.

To the eye, the costume that came back to us after applying an underlay looked genuine. However, to the touch, it felt unnaturally crisp, like something between paper and textile. Textiles are characterized by such features as the suppleness of their silk or their texture. In this regard, applying an underlay with Japanese *washi* paper had the disadvantage of detracting from the characteristic texture of the textile.

You can see here that a fabric underlay has also been applied (Fig. 23). This portion is stabilized by a fabric underlay, and the slightly whitish portions at the edges indicate that the costume is generally backed by an extremely thin paper using an adhesive called methyl cellulose. I cannot say specifically whether using methyl cellulose is good or bad, as my background is in liberal arts, but our conservation contractor assured me that it is valid, so I decided to go along with this and have entrusted the conservation to this contractor. However, no one can say what would occur fifty, sixty or a hundred years from now. Even if I had asked about the changes that might occur with the passage of time, the conservator would probably have answered, "I do not know."

I also wish to talk about a case where synthetic resin was used for conservation. This is a *noh*

costume dating from the Momoyama Period (16th century), which has been entrusted to our museum. It is the item that Ms. Koshiishi (Ministry of Culture) mentioned earlier which was conserved using synthetic resin. It is highly likely that there were lateral tears in the fabric before it was treated (Fig. 24). The extent of such damage was probably taken into consideration by the conservator who ultimately decided on the conservation method. A thin mesh-like fabric was attached to the original *nerinuki* silk using a synthetic resin. The mesh-like fabric can slightly be seen here (Figs. 25, 26). The damage has progressed in such a way that the fabric has peeled off and turned up at the edges. The back fabric has also been treated in the same manner. You can see here that the resin has impregnated in the fibers of the textile, hardened them causing to flak off. Some area have hardened and turned up at the edges (Fig. 27). These are what have occurred to the costume.

We do not know at present how the synthetic resin can be removed. At least fifty years ago, it was thought to be a proper form of treatment, but when we consider the condition that the textile is in today, I am convinced that it is extremely important to conserve artifacts with a fundamental spirit of maintaining its present state without tampering with it as much as possible.

Issues in the conservation of textiles in museums—In reference to case examples overseas

Lastly, I would like to discuss what we ought to aim for in Japan, in reference to case examples overseas.

This is a new exhibition room at The Textile Museum of George Washington University Museum (Fig. 28). There are textiles similar to those in Tōhaku's Asian Gallery, but when you look closely, they are exhibited in a different manner. The difference is that they are not suspended by passing a rod through a pole sleeve. Instead, they are exhibited by covering a board that is the same size as the textile with a fabric and sewing the textile onto the fabric. By exhibiting textiles in this way, it is possible to avoid the wrinkles that form when textiles are hung and to evenly illuminate the entire textile. It is an extremely attractive exhibit. This textile is covered from above by an acrylic cover (Fig. 29). Museums in Europe and the United States that exhibit textiles commonly adopt this style of display.

The reason why such a display is possible, is because they have an excellent back office. The Textile Museum is located in the center of Washington, but it has a facility with a storage and conservation studio just 45 minutes away by car. Most of the museum's collection is kept there.

In the storage of The Textile Museum, textiles are stored in a steel shelf. This opens electronically, and inside are drawers.

As you can see, the drawers are extremely long and large, and in each drawer, a textile item is laid out flat without being folded. As it is best not to fold textiles, the repository was made on the premise of providing the best method for storing textiles.

This is another drawer with rolls of textiles (no figure). As it is best not to fold textiles, those that can be rolled up are rolled around a core and placed on the shelf one by one.

Rugs and other large or heavy items are also rolled up and stored on a special shelf like this.

Small and fragile pieces of textiles like those kept in the Gallery of Horyuji Treasures are stored in a box made of archival paper. No matter how fragile they are, they are not reinforced by applying an underlay, they are not tampered with, they are maintained in their original conditions, and they are not modified in any way, as a general rule. Basically, they are simply placed gently in a frame made of neutral paper, covered with paper, and left untouched.

There is also a fumigation equipment in the storage. Today, fumigation tends to be associated with chemicals, but because chemical agents are not good for textiles, The Textile Museum adopts a freezing method.

Next to the storage is the conservation studio, where artifacts are treated, properly arranged for exhibition and ultimately exhibited. This internal institution constantly engages in performing these tasks. The museum can exhibit its textiles in the way it does, precisely because such a back office exists.

Museums in Japan, on the other hand, are not concerned with establishing a good back office. It is my dream, so to speak, to establish a dedicated conservation center operated by regular employees in Tokyo National Museum. However, as I cannot make this dream come true simply by articulating my wish alone, I hope to gain the understanding of the Agency for Cultural Affairs regarding the necessity of establishing a conservation center, and also look forward to Saga University's initiatives to develop professional conservators through its courses on the conservation of cultural property textiles.



Fig. 1



Fig. 5

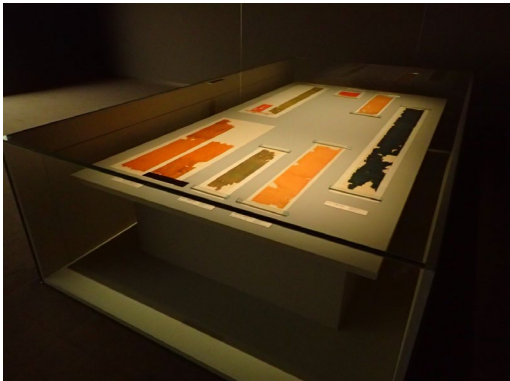


Fig. 2



Fig. 6



Fig. 3



Fig. 7



Fig. 4



Fig. 8



Fig. 9

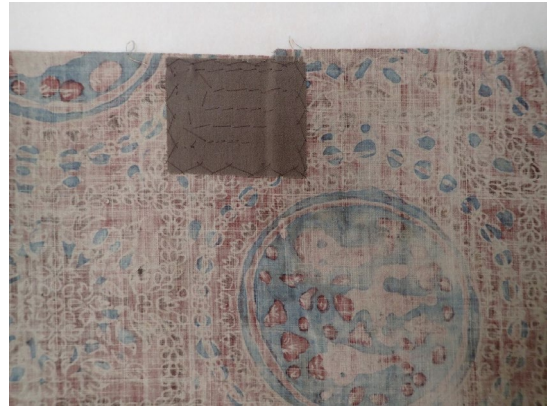


Fig. 12



Fig. 10



Fig. 13



Fig. 11



Fig. 14

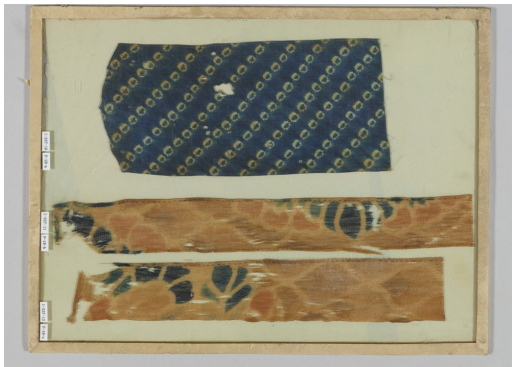


Fig. 15



Fig. 16



Fig. 17



Fig. 18



Fig. 19



Fig. 20



Fig. 21



Fig. 22



Fig. 23

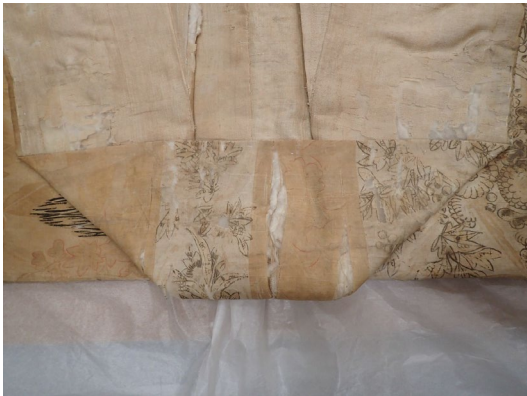


Fig. 24



Fig. 25

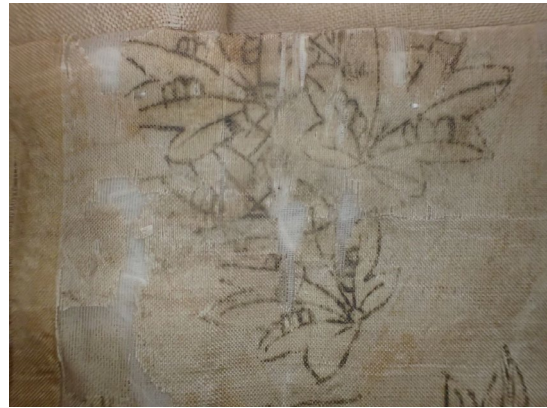


Fig. 26

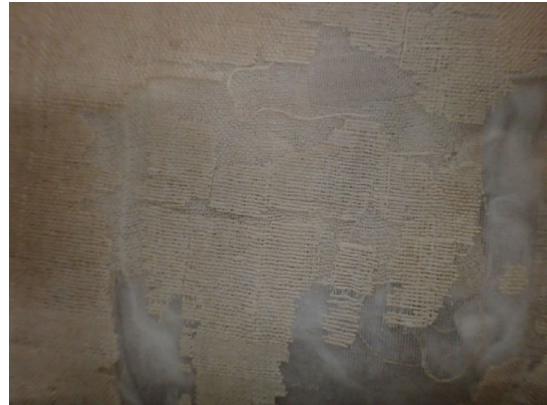


Fig. 27



Fig. 28



Fig. 29