花樹鳥獣蒔絵螺鈿洋櫃（ケルン東洋美術館）

Ornamental Coffer

Museum für Ostasiastrische Kunst, Köln

修復前　全景

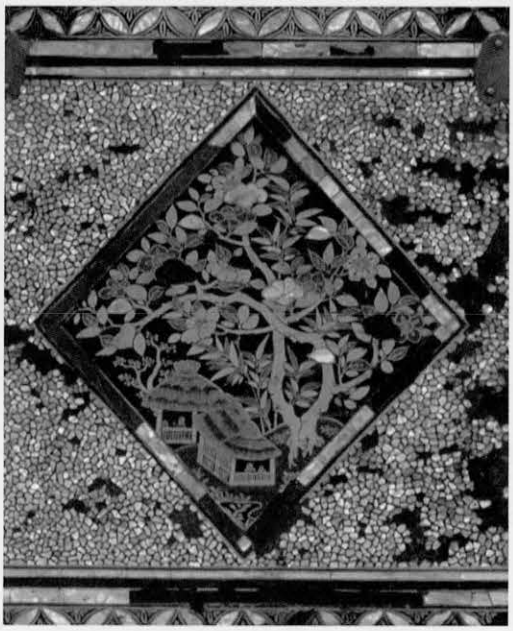
Before restoration, overall view

修復後　全景

After restoration, overall view

花樹鳥獣蒔絵螺鈿洋櫃

平成18・19・20年度（３年計画の３年目）修復事業



所蔵：ケルン東洋美術館（ドイツ）

花樹鳥獣蒔絵螺鈿洋櫃

松本　達弥・北　村　繁

資料名称	花樹鳥獣蒔絵螺鈿洋櫃
所蔵	ケルン東洋美術館　（ドイツ）
時代	17世紀　江戸時代
法量	横117.0cm　奥行47.5cm　高さ57.5cm
修復者	松本達弥　　北村　繁
修復場所	ドイツ・ケルン東洋美術館　修復アトリエ内
修復期間	H20年10月１日～11月１日

１．概要

木製漆塗り、半円筒形の蓋の付いた洋櫃で、正面に錠金具、背面に蝶番、両側面に提鐶、各角には角金具を付ける。

全ての面に窓枠を設け、正面、両側面には紅葉、橘、椿、桐、桔梗などの樹木や草花文、鹿、蝶、鳥、獅子などの鳥獣文が付く。背面には葛、朝顔の文様、蓋内部には桜、柳に３羽の鳥が描かれている。窓枠の仕切りには片輪車繋文、周りには七宝繋文を廻らす。

金具は一部を除き全て銅製の無地、表面に金鍍金は確認できない。左右側面の提鐶止めと身の内部側面の釘隠しには菊文様が付く。提鐶と釘隠しを除き全て後補のものである。

蒔絵技法は、金の平蒔絵と銀の平蒔絵に透漆を塗った表現と、一部の花、果実及び七宝、片輪車繋文には鮑貝の中厚貝が使われている。全ての文様には金の平蒔絵の付描が付く。

２．損傷状態

全体

・洋櫃の表面塗膜は全体に艶が無く、後補によるヨーロッパ製の塗料が塗られ全体に黒ずんで見える。また、塗られた塗料が劣化し白濁化している。
・錠金具、提鐶、角金具及び銅釘は、全てヨーロッパでの作り替えである。

正面

・蓋の正面中央のみじん置きされた貝は、剥離剥落が多く目立つ。一部後世に張り戻された部分があり、接着剤が溢れ、貝も乱雑に置かれている為、非常に見苦しい状態である。
・蓋の正面、螺鈿の剥落部分に、白い下地に銀色の塗料が塗られ、その塗料に断文がある。
・蓋の甲板部分、菱形枠内には後補で塗られた塗料の影響で、塗膜が黒ずんで蒔絵が見え難い状態である。
・蓋の正面左側の角金具周辺は、漆塗膜や螺鈿の剥落が多くあり木地が露出している。

・身の正面、中央及び左側の表面塗膜は、後補で塗られた塗料の劣化により白濁化している。
・身の正面下の塗膜や螺鈿は剥離剥落が多く、剥落した塗膜が下に落ちている。
・正面右下の角金具の銅釘が３本紛失している

右側面
・側面の表面塗膜には、塗られた塗料の影響で全体に黒ずみ、特に提鐶周辺の塗膜は状態が悪い。
・蓋の角部分の塗膜及び螺鈿は剥離剥落が多く、貝の剥落した部分には銀色の塗料が塗られている。
・身の側面下には木地の接合部に亀裂があり、その周辺塗膜は剥離剥落が多くある。

左側面
・表面塗膜は、何層も塗られた塗料の影響で蒔絵の金色が黒味を帯びている。
・塗膜及び螺鈿は剥離剥落が多く目立ち、対面の右側面より状態が悪く、触れるだけで剥落しそうな危険な状態である。
・側面下の塗膜は殆ど剥離し、木地接合部には亀裂を生じている。

背面
・蓋部分には、塗膜及び螺鈿の剥落が多くあり、一部ヨーロッパ製塗料で修復されている。
・蓋の両端部分の塗膜は剥離剥落が多くあり状態は悪い。
・身の左側には、木地の接合部に亀裂がある。
・右側の蝶番の銅釘３本が紛失している。

蓋内側
・内側には、木地の接合部と思われる箇所に２本の亀裂を生じている。
・左右側面に打損による塗膜の損傷がある。
・蓋表の錠金具の付け替え時に生じた、釘による塗膜の損傷がある。
・内角の表面塗膜にカビによると思われる汚れがある。

身内側
・内側の表面塗膜は全てヨーロッパ製塗料の塗り直しである。
・内部には、剥落した塗膜や螺鈿片、そして埃が溜まっている。

３．修復仕様

現在、日本の文化庁の指導のもと行われている漆工文化財保存修復の修復方針に則り、現状保持修復を基本に行う。今年度の修復は、一昨年度、昨年度に行った修復の継続とし、全面において作業を進めて行く事にした。なお、今年度の修復作業工程は下記に記す。

４．今年度の修復作業工

＜今年度の作業工程の確認＞

昨年度までの作業工程を再確認し、現状の傷みを再調査し今年度に行う作業工程を決定した。

＜修復前の記録写真撮影＞

修復作業を行う前に、修復前と修復後の比較が出来るよう写真撮影を行った。

＜後補塗料の除去（クリーニング）＞

昨年度にクリーニング作業の終わっている左右側面、正面蓋の一部と正面身の一部を除いて、全面にわたり可能な限り後補塗料の除去を行った。なお、除去作業においては表面漆塗や螺鈿の剥落しそうな危険な場所は慎重に塗料除去作業を進めた。

塗料除去に使用した溶剤は、先ず、無水エタノールに蒸留水を50%ほど混ぜた溶剤を綿棒に含ませて塗料面に塗布して後補塗料を膨潤させた後、無水エタノールで拭き取る方法でクリーニングを行った。

今回のクリーニングにより洋櫃の塗膜表面に塗られた塗料の除去が完了し、黒漆塗り面や螺鈿や平蒔絵は本来の色調に近い状態になった。

＜漆塗膜及び螺鈿の剥離部分の膠接着＞

洋櫃の表面漆塗膜や螺鈿はかなり多く剥離剥落が生じている。本来であれば後補塗料の除去を行った後で剥離した漆塗膜や貝の圧着を行うべきであるが、現状では後補塗料の除去作業によって剥離した部分の損傷を拡大する恐れのある箇所が多かった。したがって、損傷を与えてしまう箇所は先に剥離部分を膠で接着して安定を計り、その上で後補塗料の除去作業を行うことにした。

圧着作業は昨年度と同じく、洋櫃を木枠内に設置し、竹ひごの弾力を利用した芯張りによる方法を用いた。先ず、剥離した漆塗膜下や螺鈿の下にエタノールを含浸して膠の浸透を良くしてから、筆に含ませた膠を含浸した。なお、膠にも少量のエタノールを加え浸透力を良くして剥離部分に含浸し接着を行った。

今年度に圧着した部分は、正面と蓋甲板の全面で、これにより全ての面の膠による圧着処置が完了した。

＜後補充填材の除去＞

螺鈿の欠損部に充填されていた後補の充填部のうち、粗雑であったり色調が合わなかったりしたものは、慎重に刃物などを使用して除去した。除去した後補充填材の一部はサンプルとして保管した。

＜亀裂への麦漆の含浸＞

蓋甲面の中央付近、両端側面の木地接合部、底板との接合部に生じた木地の亀裂部分に溶剤で希釈した麦漆を含浸した。なお、溶剤はドイツ国内で購入した石油系溶剤を用いた。

＜欠損部への刻苧の充填＞

麦漆に炭化させた松の木粉（惣身粉そうみこ）と珪藻土を炭化させた地の粉（輪島地の粉三辺地）を混合して作った刻苧を塗膜欠損部や素地の露出部分に充填した。

＜刻苧部分の研ぎ＞

充填した刻苧が乾燥した後、刃物や砥石を使って表面を平滑に整えた。

＜際錆付け＞

輪島地の粉四辺地を水練りし、生正味漆を混合して作った錆漆で刻苧充填部や漆塗膜や螺鈿の細かな破損部に際錆を施した。

＜漆固め＞

劣化した漆塗膜や蒔絵部分に漆固めを行った。漆固めに使用する漆は黒漆塗り部分と蒔絵部分でそれぞれ調合の比率を変え、先に蒔絵部分のみの漆固めを行い、続いて黒漆塗り部分の漆固めを行った。調合の比率については、蒔絵部分用は梨子地漆６：木地呂漆３：生正味漆１とし、黒漆塗り用は木地呂漆６：梨子地漆３：生正味漆１とした。調合した漆は上記と同じ石油系溶剤で４倍程に希釈して用いた。塗布した漆は表面に残さないように丁寧に拭き取った。

＜修復作業終了の記録写真撮影＞

今年度の修復作業工程を終えて全体の修復作業を終了し、修復後の記録写真撮影を行った。

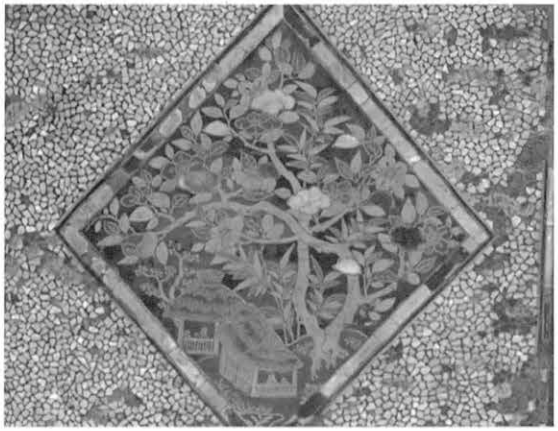
修復前
Before restoration, 2006

修復後
Aftier restoration, 2008

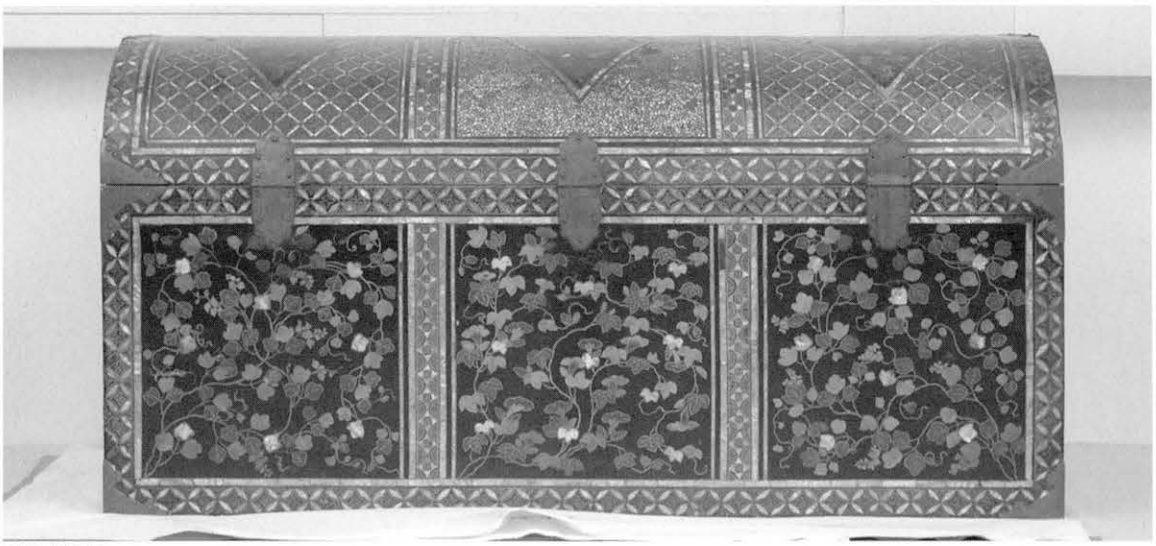
正面 修復前
Front before restoration, 2006

正面デザイン
Design on the front, 2006

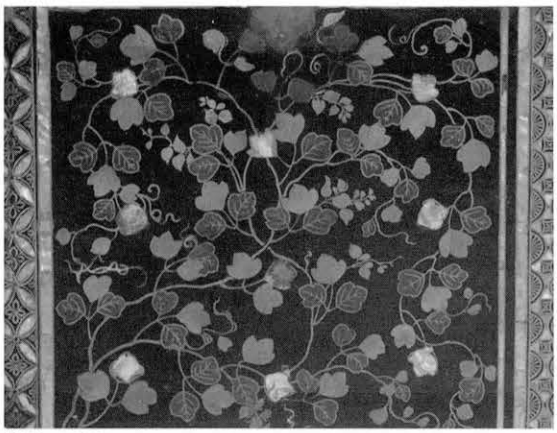
正面デザイン
Design on the front, 2006



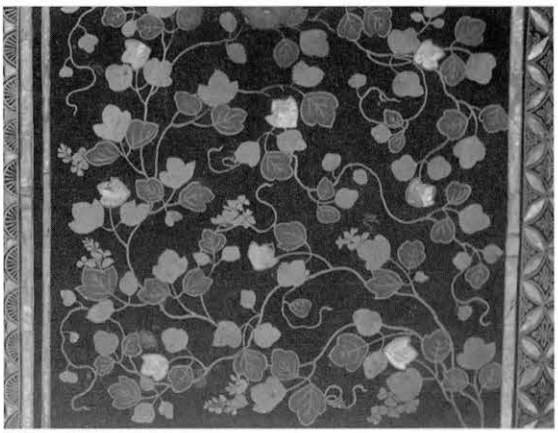
正面デザイン
Design on the front, 2006



背面 修復前
Back before restoration, 2006



背面 デザイン
Design on the back, 2006



背面 デザイン
Design on the back, 2006

背面 デザイン
Design on the back, 2006

右側面　修復前
Right side before restoration, 2006

左側面　修復前
Left side before restoration, 2006

右側面　デザイン
Design on the right side, 2006

右側面　デザイン
Design on the right side, 2006

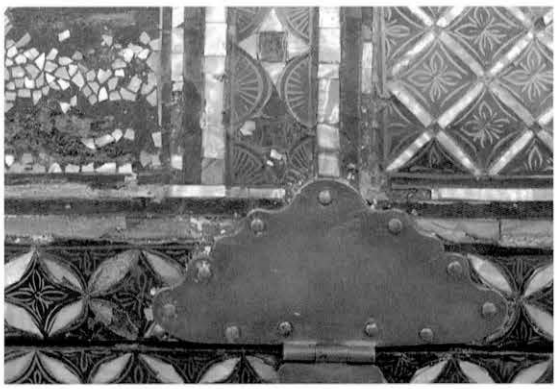
左側面　デザイン
Design on the left side, 2006

左側面　デザイン
Design on the left side, 2006

蓋甲板 修復前
Top board of the lid before restoration, 2006

蓋内側
Inside of the lid, 2006

金具周辺部分の損傷
Damage around a metal fitting, 2006

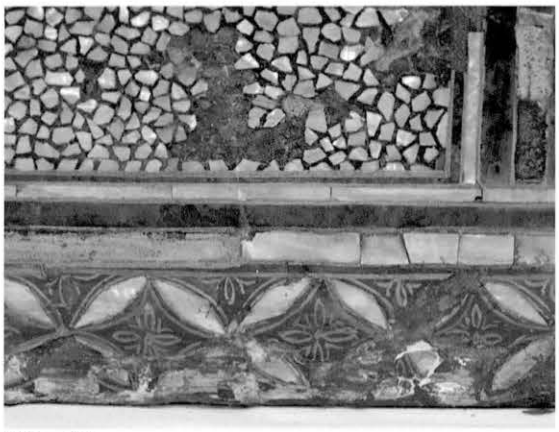


金具周辺部分の損傷
Damage around a metal fitting, 2006

後補材料の剥落
Loss of restoration material from past restorations, 2006

後補材料の剥落
Loss of restoration material from past restorations, 2006

螺鈿の剥落
Missing *raden* shell pieces, 2006

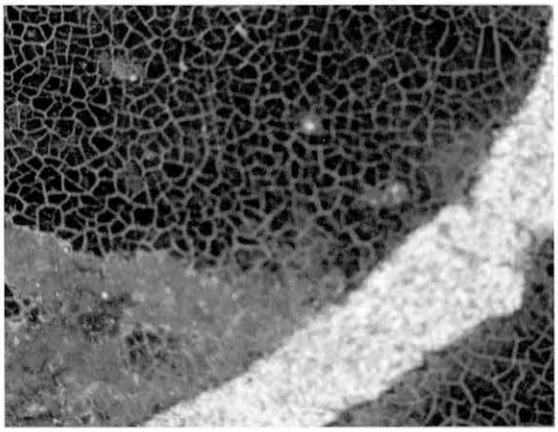


螺鈿の剥落
Missing *raden* shell pieces, 2006

後補塗料
Coating material from past restorations, 2006

後補塗料
Coating material from past restorations, 2006

漆塗膜の劣化　後補塗料の劣化
Deterioration of ursuhi coating film, deterioration of coating material from past restorations, 2006

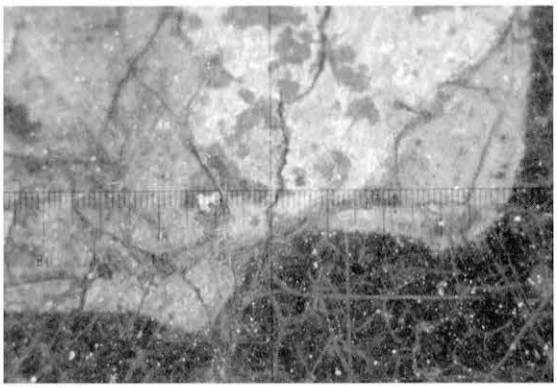


漆塗膜の劣化　後補塗料の劣化×50
Deterioration of ursuhi coating film, deterioration of coating material from past restorations ×50, 2006

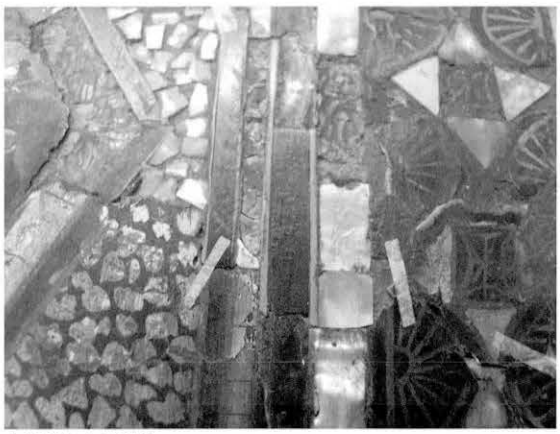
後補塗料の劣化
Deterioration of coating material from past restorations, 2006

後補塗料の劣化×50
Deterioration of coating material from past restorations ×50, 2006

後補塗料
Coating material from past restorations, 2006



後補塗料×50
Coating material from past restorations ×50, 2006



木象嵌による修復
Restoration in Europe by inlaying wood, 2006

木象嵌による修復 拡大
Restoration in Europe by inlaying wood, enlarged, 2006

養生
Facing, 2006

養生
Facing, 2006

クリーニング後補塗料の除去
Cleaning, removing coating material from past restorations, 2006

クリーニング後補塗料の除去
Cleaning, removing coating material from past restorations, 2006

後補塗料の除去前
Before cleaning

後補塗料の除去後
Aftier cleaning

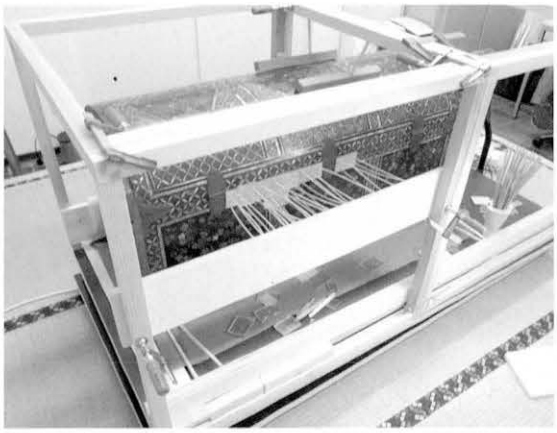
後補塗料の除去前
Before cleaning, 2006

後補塗料の除去後
Aftier cleaning, 2008

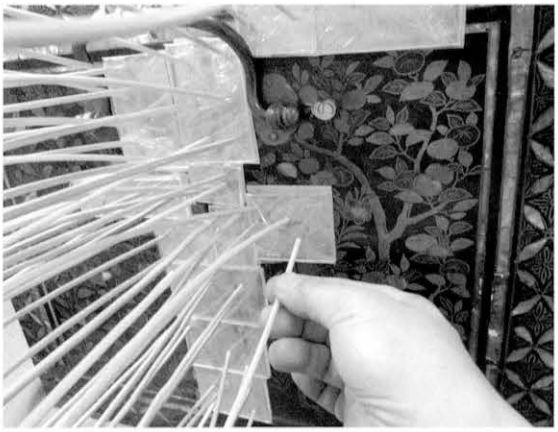
エタノール含浸
Impregnating ethanol

エタノール含浸
Impregnating ethanol

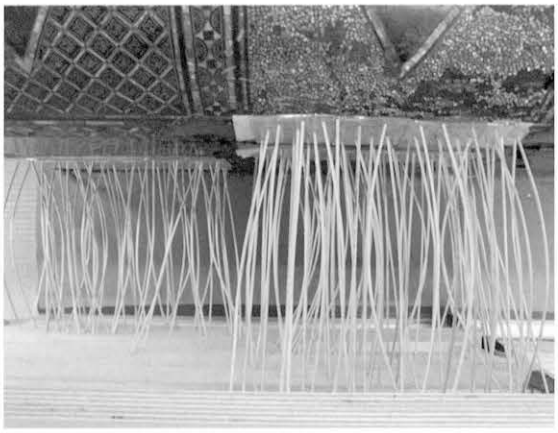
膠含浸
Impregnating animal qlue



芯張り圧着用木枠
Wooden frame for *shimbari*

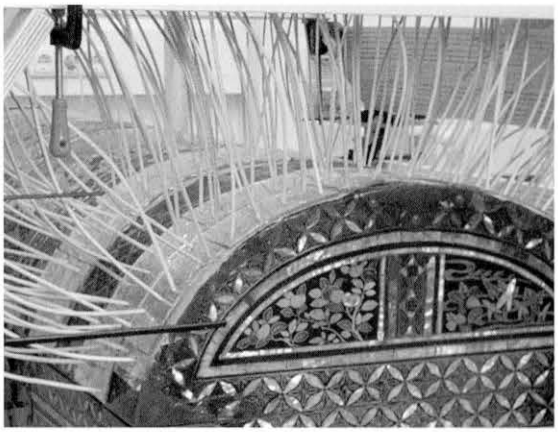


芯張り圧着
Press-stabilizing, *shimbari* techninque



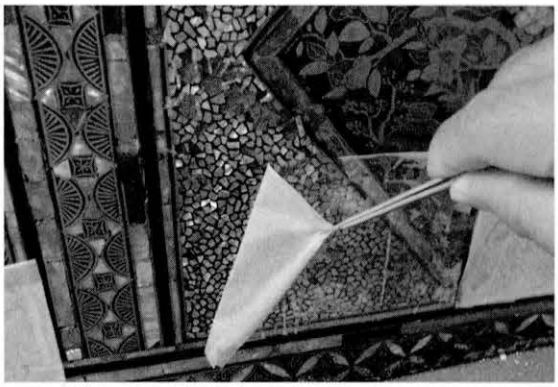
芯張り圧着（正面）
Press-stabilizing, *shimbari* techninque (front)

芯張り圧着（側面）
Press-stabilizing, *shimbari* techninque (side)



芯張り圧着（蓋甲面）
Press-stabilizing, *shimbari* techninque (lid)

圧着作業時の紙 除去
Removing paper used in press-stabilization



圧着作業時の紙 除去
Removing paper used in press-stabilization

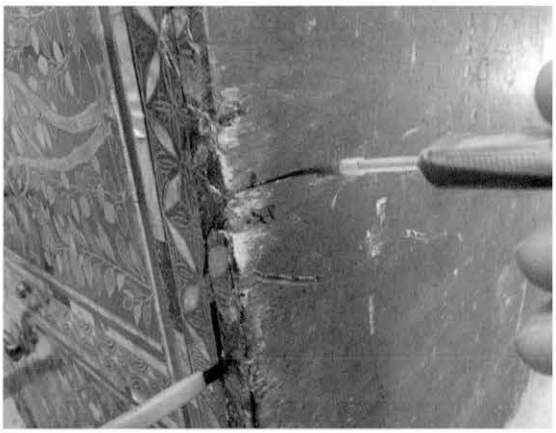
圧着前
Before press-stabilization

圧着後
After press-stabilization

後補充填の除去
Removing filler from past restorations

後補充填の除去
Removing filler from past restorations

亀裂部分に麦漆の含浸
Impregnating *mugi-urushi* into a crack



亀裂部分に麦漆の含浸
Impregnating *mugi-urushi* into a crack

刻苧の充填
Filling *kokuso*

刻苧部分の研ぎ
Polishing *kokuso*

際錆
Kiwasabi

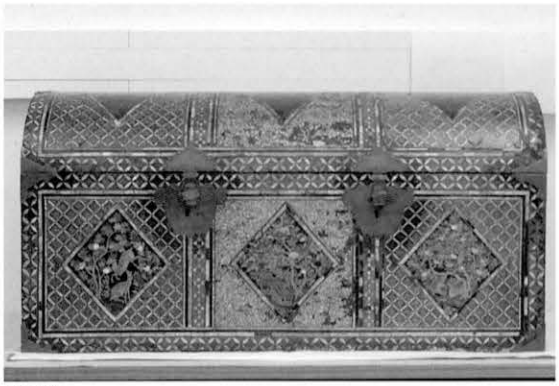
際錆
Kiwasabi

漆固め（蒔絵部分）
Consolidating urushi (*makie* portion)

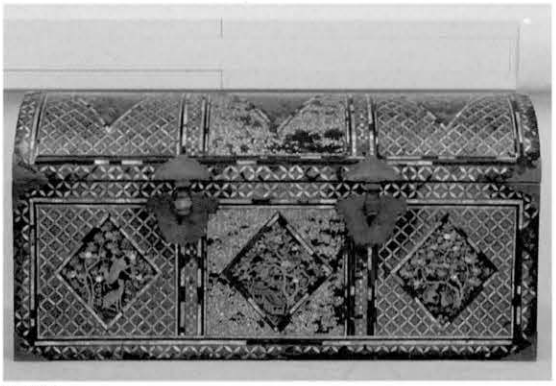
漆固め
Consolidating urushi

漆固め（黒漆部分）
Consolidating urushi (black urushi portion)

漆固めの拭き取り
Wiping off excess urushi after consolidating



修復前
Before restoration, 2006



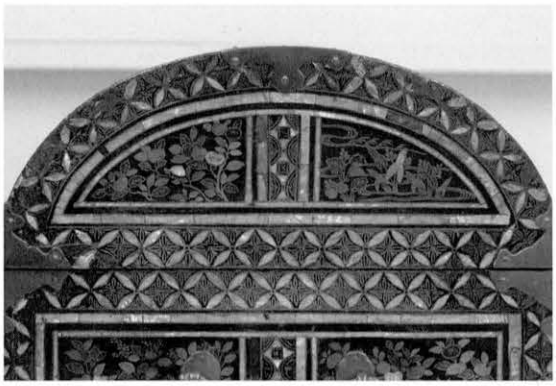
修復後
Aftier restoration, 2008

修復前
Before restoration, 2006

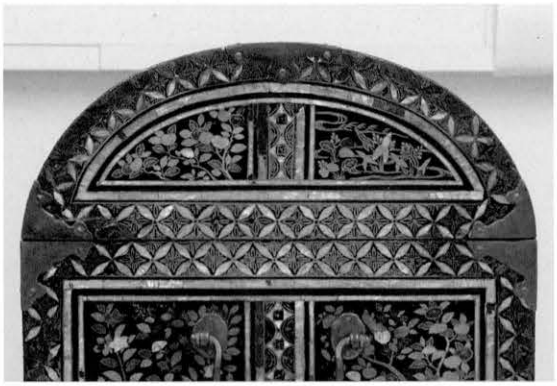
修復後
Aftier restoration, 2008

修復前
Before restoration, 2006

修復後
Aftier restoration, 2008



修復前
Leftside before restoration, 2006



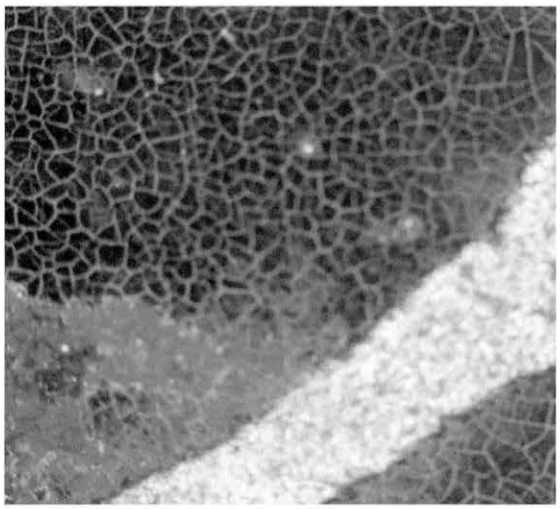
修復後
Leftside aftier restoration, 2008

修復前
Before restoration, 2006

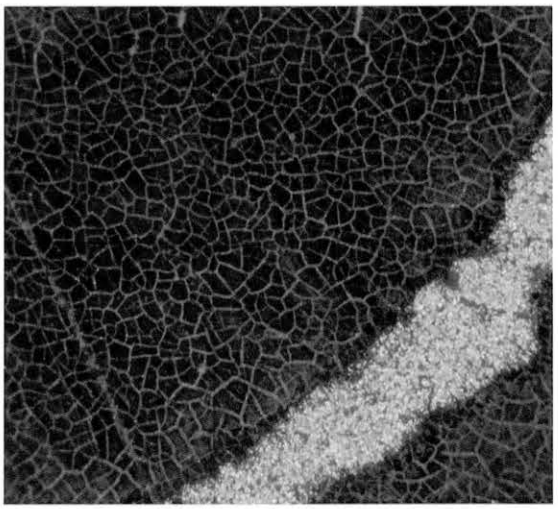
修復後
Aftier restoration, 2008

修復前
Before restoration, 2006

修復後
Aftier restoration, 2008



拡大写真×50　修復前
Micrograph × 50, before restoration, 2006



拡大写真×50　修復後
Micrograph × 50, after restoration, 2008

修復後
After restoration, 2008

On the Restoration of *Ornamental Coffer with Flower and Bird Design in Makie and Raden Techniques*

Tatsuya Matsumoto and Shigeru Kitamura

Name of the object: *Ornamental Coffer with Flower and Bird Design in Makie and Raden Techniques*
Collection of Museum für Ostasiastrische Kunst, Köln (Germany)
Period of manufacture: 17th century, Edo period
Dimensions (cm): 117.0 x 47.5 x 57.5
Restorers: Tatsuya Matsumoto and Shigeru Kitamura
Period of restoration: October 1 – November 1, 2009
Place of restoration: Restoration Studio, Museum für Ostasiastrische Kunst, Köln (Germany)

1. Structure

The coffer is made of wood and coated with urushi. It has a dome-shaped lid. On the front is a metal lock and on the back are hinges. There are handles on both sides and corner metal fittings on each corner.

There are cartouches on all the sides. On the front and side cartouches are motifs of trees and flowers like maple, orange, camellia, paulownia and Chinese bell flower as well as those of birds and animals like deer, butterflies, birds and Chinese-style lions. The designs on the back are those of arrowroot and morning glory, while on the inner side of the lid is a design of a cherry tree and flower, a willow tree and three birds. Cartouches are partitioned with a consecutive half-wheel pattern and surrounded by interlinking circles.

With the exception of some, the metal fittings are made of copper and have no decoration. Gold gilding is not observed on the surface. On the metal fittings at the base of the handles on both sides of the coffer and the nail covers on the inner side of the body is a design of a chrysanthemum. All the metal fittings other than those at the base of the handles and the nail covers are later additions.

Makie techniques used include gold and silver *hiramakie* with *suki-urushi* coating. Abalone shell pieces of medium thickness are used on some of the flowers and fruits as well as on the interlinking circles and consecutive half-wheel pattern. There are fine line drawings *(tsukegaki)* on the gold *hiramakie* of all the designs.

2. Conditions of damage

Overall

- The surface coating film of the coffer lacked luster and appeared dark due to the application of European coating material in the past. Moreover, that coating material had deteriorated and become opaque.
- The metal lock, handles, corner metal fittings and copper nails had been all made in Europe to replace the original.

Front

- Many of the small shell pieces scattered on the front center of the lid (*mijingai*) had become lifted or lost. Some of them had been reattached, but too much adhesive had been used and the shell pieces had been positioned carelessly, destroying the beauty of the coffer.

- Silver coating material had been used to coat over the white foundation found on the front of the lid where the shell pieces had been lost, and there were microcracks on this coating.
- On the top board of the lid, the coating film inside the rhombus-shaped cartouche had become dark due to the coating film that had been applied in the past, making it difficult to see the *makie* decoration.
- The urushi coating film and the shell pieces on the area around the metal fitting on the front left corner of the lid had become detached and the substrate exposed.
- The surface coating film that had been applied in the past on the front of the body had become opaque at the center and to the left due to deterioration.
- The coating film and the *raden* shell pieses on the lower portion of the front of the body had become lifted or detached, and the detached coating film was found on the table on which the coffer was placed.
- Three of the copper nails were missing from the metal fitting of the front lower right corner.

Right side

- The surface coating film had become dark and its condition was bad, especially around the handle.
- There was much lifting and detachment of the coating film and *raden* shell pieces on the corner of the lid. Parts where the shell pieces had fallen were coated with a silver coating material.
- There were cracks on the joint of the substrate on the lower side face of the body. The coating film around the cracks had become lifted or detached.

Left side

- The gold color of the *makie* had become dark due to the many layers of coating material.
- Lifting and loss of the coating film and *raden* shell pieces were quite conspicuous, more so than on the right side. There was a great risk of their becoming detached and lost even with a slight contact.
- Almost all of the coating film on the lower side had been lost and there were cracks on the joints of the substrate.

Back

- Much of the coating film and *raden* shell pieces on the lid had fallen and some areas had been restored with European coating material.
- The condition of the coating film at both ends of the lid was not so good, there being much lifting and loss.
- There were cracks on the joint of the substrate on the left side of the body.
- Three of the nails on the right hinge were missing.

Inner side of the lid

- There were two cracks on what was thought to be the joint of the substrate.
- The coating film on the left and right sides had been damaged by impact.
- The coating film had been damaged by nails when the lock on the lid was replaced.
- There were stains on the coating film on the inner corner. These were considered to have been made by molds.

Inner side of the body

- The inner side of the body had been completely recoated with European coating material.
- The coating film and fragments of *raden* shell pieces that had fallen as well as dust were found inside the coffer.

3. Restoration specification

In accordance with the principle of conservation of urushi cultural properties that is conducted under the guidance of the Agency for Cultural Affairs, it was decided that the fundamental principle of restoration would be one of the maintenance of the present condition. It was decided that restoration work for this fiscal year would consist of the continuation of the work from the previous two years and that restoration would extend over the entire coffer.

4. Restoration procedures for fiscal year 2009

Confirming the procedures of restoration

- Restoration procedures for this year were decided after reconfirming the work that had been done until now and the condition of damage.

Photographing before restoration

- Photographs were taken before beginning the work so that the coffer before and after restoration might be compared.

Removal of the coating material from the past – cleaning

- Coating material that had been applied in the past was removed from the entire coffer as much as possible, with the exception of the left and right sides, part of the lid front and part of the body front where cleaning had already been completed last year. Special care was taken in cleaning the surface coating film and *raden* shell pieces that were at risk of becoming detached and lost during removal of the coating material.
- First, a mixture of 50% absolute ethanol and distilled water was applied with cotton swabs that had been immersed in this mixture. After the coating film had become soft, absolute ethanol was used to wipe off the coating material.
- With this cleaning, it was possible to remove the coating material that had been applied on the surface of the coating film of the coffer in the past. As a result, the tone of the black urushi coated surface, *raden* and *hiramakie* were returned to their original as much as possible.

Reattaching of the urushi coating film and the *raden* shell pieces that had become detached

- There was much lifting and detachment of the surface urushi coating film and the *raden* shell pieces. Normally, they would be reattached and stabilized by applying pressure after the coating material applied in the past is removed. However, since there were many places where there was risk of the damages becoming greater, it was decided that animal glue would be used to reattach and stabilize those parts where there was risk of further damage before proceeding with the work of removing the coating material that had been applied in the past.
- For press-stabilizing, the coffer was placed in a wooden frame and the resiliency of thin bamboo sticks was used (*shimbari* technique) , as it was done last year. First, ethanol was impregnated under the lifted urushi coating film and the *raden* shell pieces to make it easy for animal glue to permeate. Then animal glue was impregnated with a brush. A small amount of ethanol was also added to animal glue to increase permeation.
- The entire front and the top board of the lid were press-stabilized this year. With this, treatment of the entire coffer by press-stabilization with animal glue was completed.

Removal of the filling material from the past

- Of the filling material that had been used mainly on the missing *raden* parts, those that had been applied carelessly or those where the color did not match the surroundings were carefully removed with a knife. Some of the filling material thus removed was stored as samples.

Impregnation of *mugi-urushi* into cracks

- *Mugi-urushi* diluted with a solvent was impregnated into the cracks that had formed on the top of the lid near the center, on the joints of the substrate on the left and right sides, and between the sides and the bottom of the coffer. Petroleum-based solvent purchased in Germany was used.

Filling of the missing areas with *kokuso*

- Roasted pine sawdust and *jinoko* (baked diatomaceous earth, *Wajima sampenji jinoko*) were added to *mugi-urushi* to make *kokuso*. This was filled into the areas where the coating film was missing or where the substrate had become exposed.

Polishing the areas where *kokuso* had been applied

- After the *kokuso* had hardened, the area was smoothed flat with a knife and polished with a whetstone.

Kiwasabi

- *Wajima yonhenji jinoko* kneaded with water was added to *kijomi urushi* to make *sabi-urushi*. This was applied around the areas where *kokuso* had been applied and to the *raden* that had been minutely damaged.

Consolidation

- Urushi was applied to the deteriorated urushi coating film and the *makie* portion for consolidation. Urushi used for consolidation of the black urushi coated area and the *makie* was adjusted appropriately with different ratios of urushi. The *makie* portion was consolidated first; then the black urushi coated area was consolidated. Urushi used for the *makie* portion was made by mixing *nashiji urushi, kijiro urushi* and *kijomi urushi* at a ratio of 6 : 3 : 1. Urushi for the black urushi coated area was made by mixing *kijiro urushi, nashiji urushi* and *kijomi urushi* at a ratio of 6 : 3 : 1. These urushi were diluted approximately four times with the petroleum-based solvent mentioned above. Excess urushi was wiped off carefully.

Photographing after the completion of the restoration work

- With the completion of this year's restoration procedures, the restoration of the entire coffer was finished. Photographs were taken of the coffer after restoration.