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# 星曼荼羅

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平成20年度修復事業



所蔵：バンクーバー博物館

星曼荼羅

# 修復報告

有限責任中間法人 国宝修理装潢師連盟 九州支部  
君嶋 隆幸・中村 隆博

## I. 文化財の名称等

1. 名称 星曼荼羅
2. 作者 不祥
3. 所蔵者 バンクーバー博物館（カナダ）
4. 品質・形状 絹本著色・掛幅装（1幅）

## II. 工期および施工者

1. 工期  
自：平成20年 6月4日  
至：平成21年 3月24日
2. 施工者  
有限責任中間法人 国宝修理装潢師連盟 九州支部  
支部長 藤岡 春樹
3. 施工場所  
九州国立博物館 修復施設 装潢絵画室
4. 修理担当者  
君嶋 隆幸・中村 隆博

## III. 文化財の構造

1. 材質：絹（経31中デニール80枚 緯31中デニール×2 100横）
2. 寸法（単位はcm）

	修復前（図1）		修復後（図2）	
	縦	横	縦	横
本紙	86.7	40.2	87	40.5
表装	148.4	52.7	159.4	56.7

	修復前	修復後
形式	掛幅装（仏表具）	掛幅装（仏表具）
中縁	茶地丸繫紋銀欄	丹地二重蔓中牡丹唐草紋金欄
総縁	萌黄地唐草紋綾	茶地飛雲紋綾
軸首	唐花紋金鍍金軸	蓮華紋金鍍金軸
肌裏紙	楮紙	楮紙（美濃：長谷川製〈美濃紙〉）
増裏紙	楮紙	楮紙（吉野：上窪製〈美栖紙〉）
中裏紙	—	楮紙（吉野：上窪製〈美栖紙〉）
総裏紙	楮紙	楮紙（吉野：福西製〈宇陀紙〉）
補修絹	—	電子線劣化絹（経 31中デニール60枚、緯 31中デニール×2 80横）
折伏せ	—	楮紙（美濃：長谷川製〈美濃紙〉）
保存箱	—	桐太巻添軸付、桐製屋郎箱 （京都：黒田製）

#### IV. 修復前の状況

1. 本紙に折れが多数生じており、折れ山が磨損・欠失していた。
2. 画面全体に経年の汚れ、シミが付着しており、鑑賞の妨げとなっていた。
3. 絵具層の膠着力が低下しており、剥落の恐れがあった。
4. 料絹は肌裏から浮いており、一端で固定されているに過ぎなかった（図5）。
5. 肌裏紙に付着した裏絵具の図様が天地反対になっていた。
6. 裂の汚れや劣化が激しく、八双・軸木の所で切れていた（図6）。
7. 軸首は右方分を亡失し、左方分も一部が欠失していた（図7）。

#### V. 修復方針

今回の修復で改善しなければならない主な点は、本紙全体に見られる汚れと折れ、裏打の糊離れにある。そこで、クリーニングにより絵絹に付着した汚れなどを除去し、絵具の強化、肌裏の取り替えなどを行い、掛幅装に仕立てて本紙を安定した状態に復することを修理の基本方針とした。

##### 1. 本紙

- a. 膠水溶液を用い、絵具層の剥落止めを行い、各絵具層の膠着力の向上を図る。

- b. 本紙に付着している汚れを除去するために、濾過水によるクリーニングを行う。
- c. 絵絹の欠失部に電子線劣化絹で補修を施す。
- d. 絵絹の色調に合わせて薄美濃紙を染色し、新たに肌裏を打つ。
- e. 補修を施した箇所にも本紙基調色のトーニングを施す。

## 2. 表装

- a. 劣化や汚れがひどいため、裂地を新調する。
- b. 表具形式は修復前と同じく、仏表装とする。
- c. 軸首（金軸）、八双、軸木、紐を新調する。

## 3. 保存箱

- a. 桐太巻添軸付の桐製屋郎箱、紙製覆帙、羽二重の包裂を新調する。

## VI. 修復工程

### 1. 事前調査

写真撮影を行い、修復前の損傷状況の記録を行った。

### 2. 解体

掛幅装を解体し、肌裏紙以外の旧裏打紙を除去した。

### 3. 汚れの除去

初めに、刷毛と吸引機を使って表面に付着した埃類を除去した。

次に、濾過水を本紙表面から噴霧し、本紙の下に敷いた吸い取り紙に吸収させる方法で汚れを除去した。

### 4. 剥落止め

1回目の剥落止めとしてスプレーで0.5%の膠水溶液の噴霧を行った。

その後、2%（若しくは3%）膠水溶液を各絵具層に筆にて塗布し、含浸させ、剥落止めを行った。

### 5. 補絹

本紙絵絹の欠失箇所に電子線劣化絹で補修を行った。

### 6. 肌裏打ち

薄美濃紙を用い、小麦澱粉糊（以後、新糊という）で肌裏打ちを行った。

### 7. 増裏打ち

美栖紙を用い、新糊を10年間涼暗所に保管した糊（以後、古糊という）で増裏打ちを行った。

### 8. 折れ伏せ

折れの発生していた箇所、および、今後折れが発生する恐れがある箇所に、約2mm幅の薄美濃紙の帯を新糊を用いて折れ伏せを施した。

### 9. 表装裂地の調整

本画面に対してどのような裂がふさわしいかを、パソコン上でのバーチャル（仮想）による取り合わせを検討し、表装裂地を選定した。

決定した表装裂地は新糊を用いてそれぞれに薄美濃紙で肌裏打ちを行い、さらに、古糊を用い美栖紙で増裏打ちを行った。

### 10. 付け廻し

本紙と表装裂地を掛幅装の形に付け廻した。



11. 中裏打ち  
古糊を用い、美栖紙で中裏打ちを行い、仮張りし乾燥させた。
12. 総裏打ち  
古糊を用い、宇陀紙で総裏打ちを行った。
13. 表仮張り  
表張りをを行い、十分に乾燥させた。
14. トーニング  
新たに補絹した箇所、基調色のトーニングを施した。
15. 裏仮張り  
裏張りし、1ヶ月以上、十分に乾燥させた。
16. 仕上げ  
軸首（金軸、図8）、八双、軸木、紐を新調し、掛幅装に仕立てた。  
新調した桐太巻添軸付きの桐製屋郎箱に、羽二重の包裂に包んで納めた。  
紙製の覆帙を新調した（図9）。
17. 記録等  
今回の修理に関する記録、修理後の写真撮影を行った。

## VII. 特記事項

旧肌裏紙に付着していた裏彩色は、絵絹の本来それがあったところに戻すことが望ましい。本作品の場合、既に旧肌裏紙が絵絹から遊離してかなりの時間が経過しているうえに、過去において旧肌裏紙を天地逆に貼り戻した時期があったため、旧肌裏紙上の同じ箇所に裏彩色の一部が、図様を天地逆にしながら二重に残っていた箇所が認められた（図4）。これを絵絹のものの箇所に戻す際、本紙に与えるであろう負荷を十分に考慮し、今回の修復では、旧肌裏紙を絵絹に貼り戻して旧肌裏紙に付着した裏彩色を絵絹に戻すことはせず、旧表装裂地とともに別置保存することが望ましいとの結論に至った。

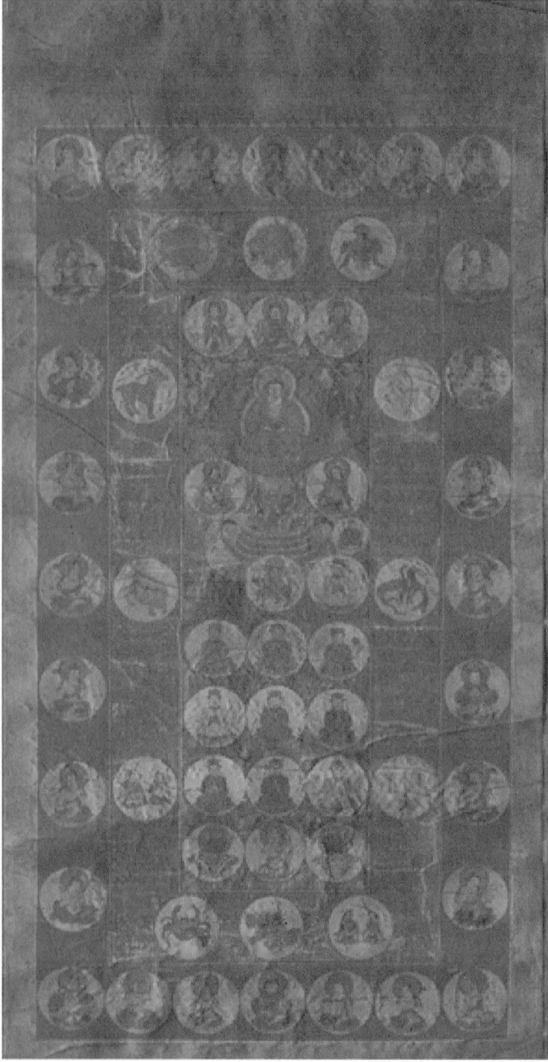


图1 修復前 (本紙)  
Fig. 1 Before treatment (painting)

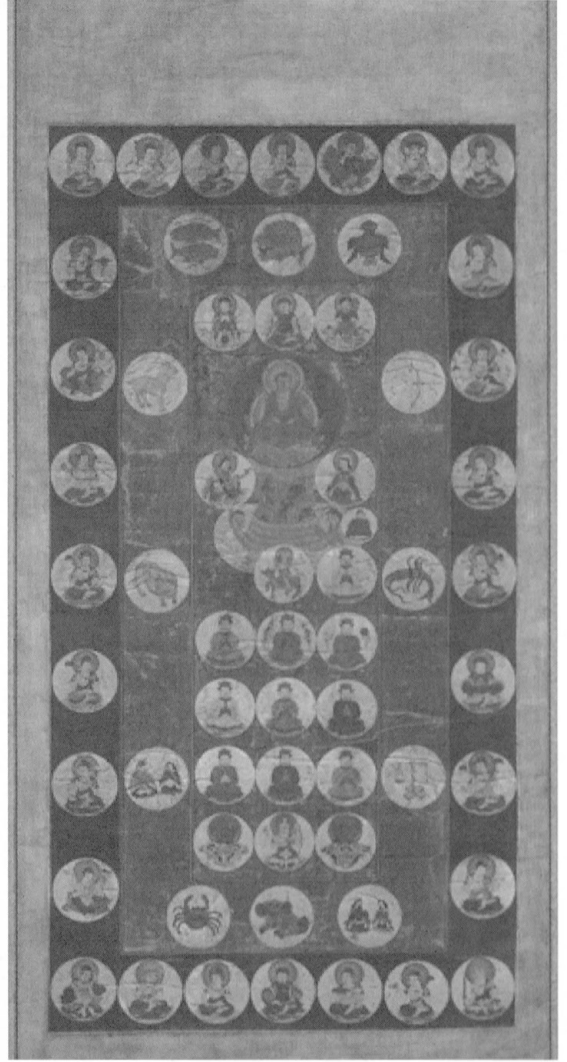


图2 修復後 (本紙)  
Fig. 2 After treatment (painting)

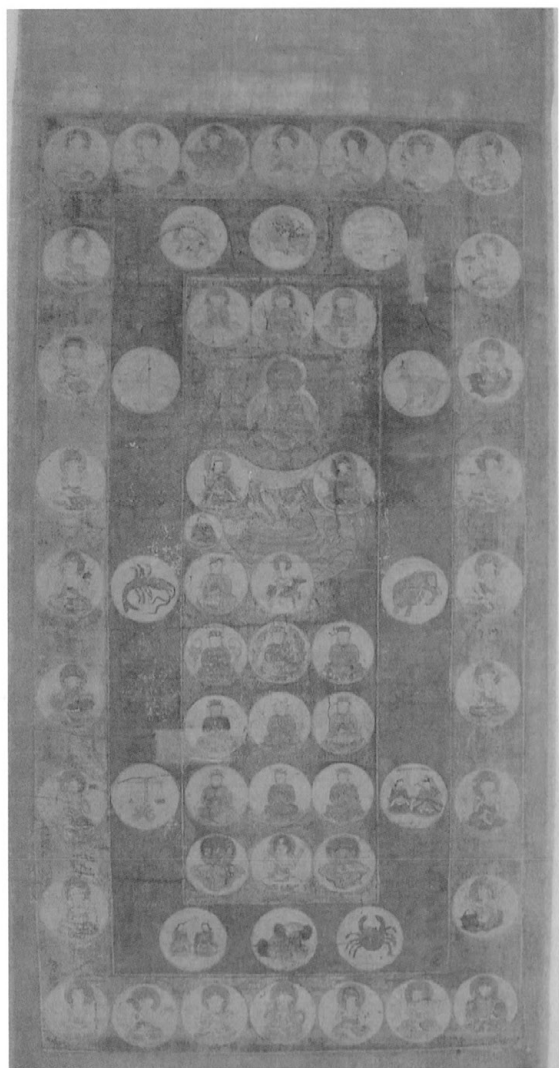


図3 絵絹の裏彩色の様子  
Fig. 3 *Urzaishiki* applied to the reverse side of the silk support

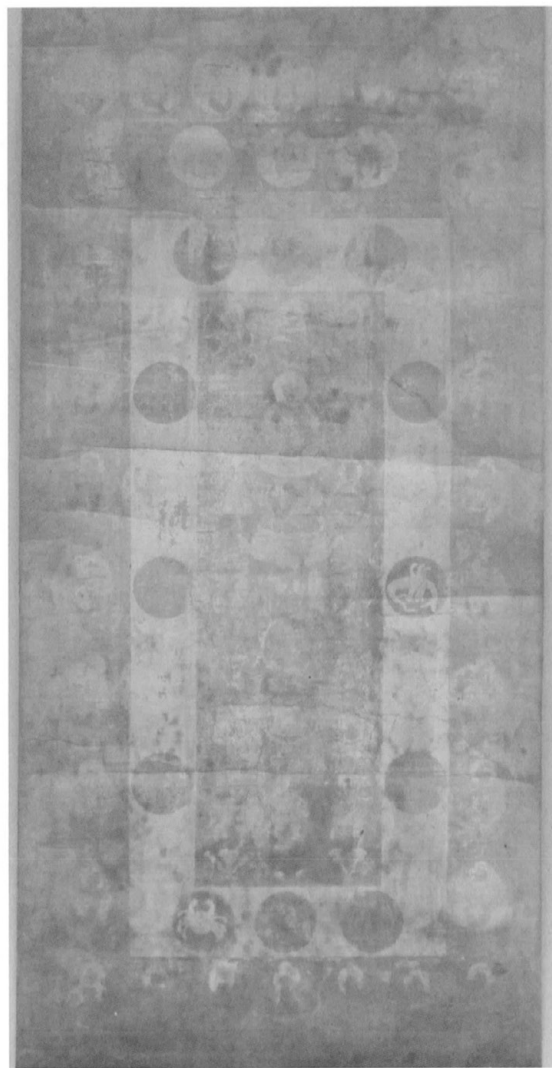


図4 旧肌裏紙に付着した裏彩色  
Fig. 4 Pigments attached to the reverse side of the old first lining



図5 修復前（部分）：絵絹は肌裏紙から遊離し、一端で固定されているに過ぎなかった

Fig. 5 Before treatment (Detail): The silk support of the painting had separated from the first lining paper and was only attached at one end of the painting.



図6 修復前（部分）：旧表装裂は汚れや劣化が著しく、軸木のところで断裂していた

Fig. 6 Before treatment (Detail): The former mounting fabric was severely soiled, damaged, and torn at the bottom roller.

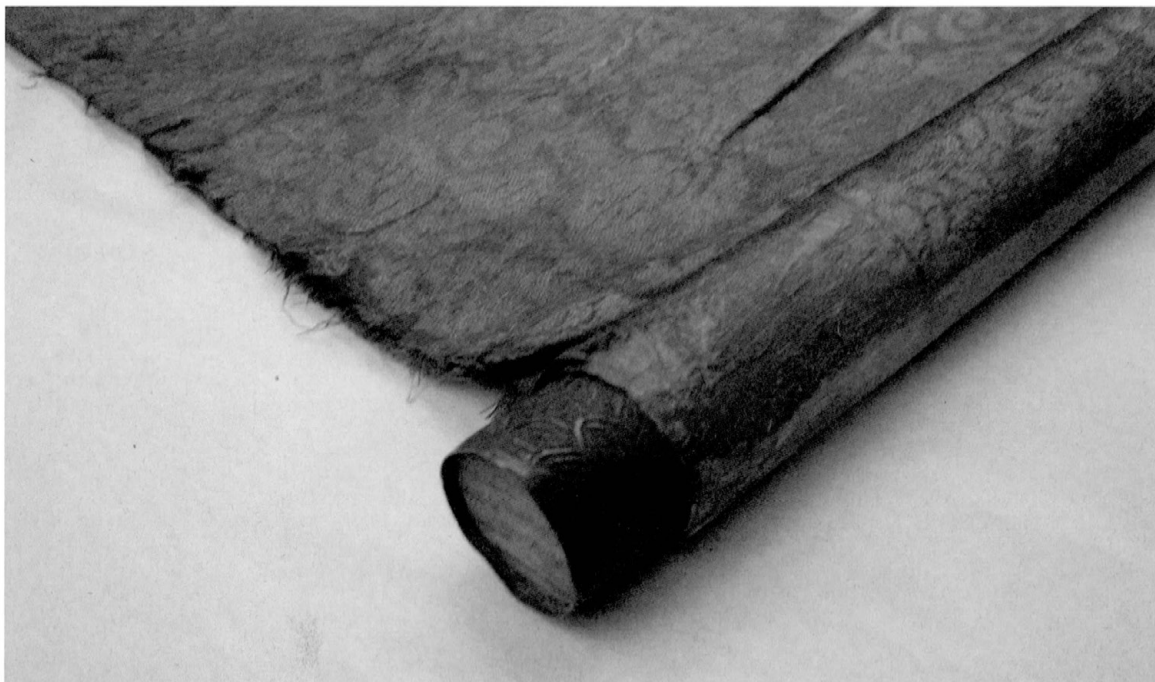


図7 修復前：軸首の左方分は一部が欠失していた  
Fig. 7 Before treatment: Part of the left roller knob was missing.



図8 修復後：新調した軸首（金軸）  
Fig. 8 After treatment: A new gold-plated roller knob

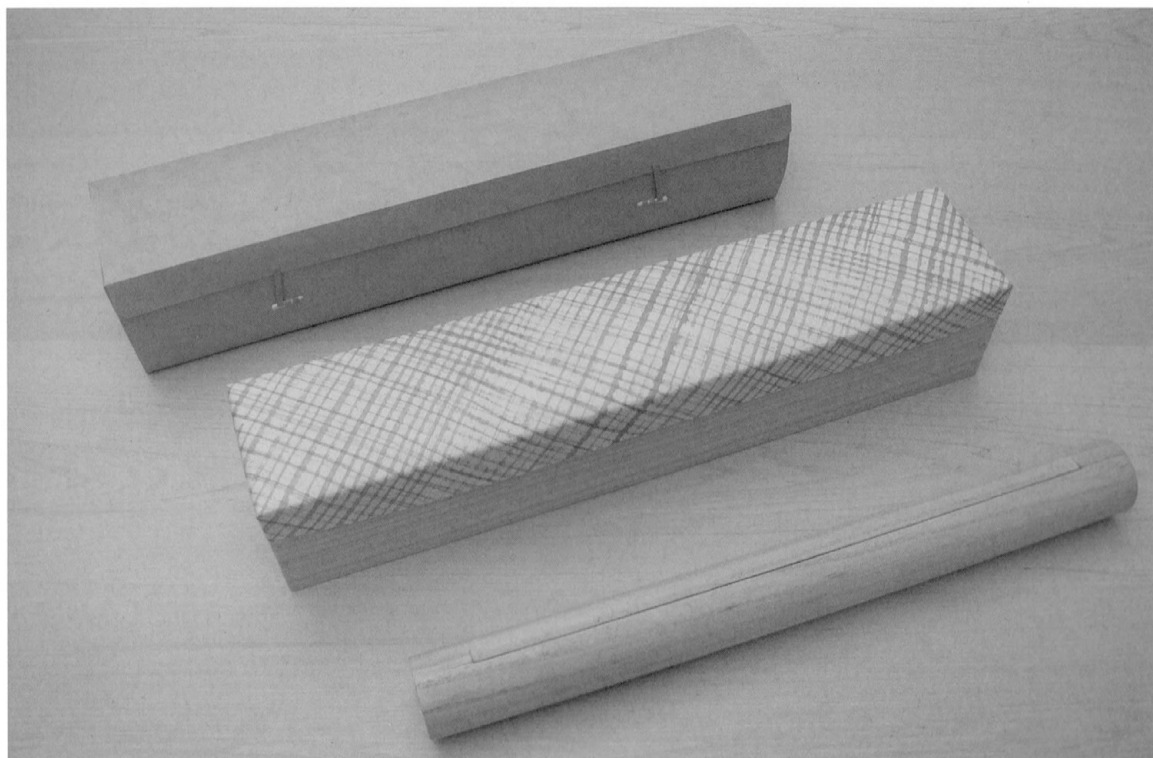


図9 新調した保存用の桐太巻添軸、桐製屋郎箱、紙製の覆帙

Fig. 9 A new large paulownia roller clamp, paulownia *yaro* box with paper box corer, and a folding paper *chitsu* case were made.



*Star Mandala*

# Treatment Report

The Association of Conservation for National Treasures, Kyushu branch  
Takayuki Kimishima, Takahiro Nakamura

## I . Description and title of object

1. Title                      Star Mandala
2. Artist                     Unknown
3. Collection                Vancouver Museum, Canada
4. Format and media:      Hanging scroll, color on silk

## II . Treatment period, conservator, etc.

1. Treatment period: June 4, 2008 - March 24, 2009
2. Treatment undertaken by:  
The Association of Conservation for National Treasures, Kyushu Branch  
Branch Director: Haruki Fujioka
3. Location of treatment:  
Department of Conservation, Kyushu National Museum
4. Project managers:  
akayuki Kimishima • Takahiro Nakamura

## III . Structure of the cultural property

1. Painting Support : Silk  
Warp thread: 80 strands per 3.03cm, 31 denier  
Weft thread: 100 double-strands per 3.03cm, 31 denier
2. Dimensions (cm)

	Before treatment (Fig. 1)		After treatment (Fig. 2)	
	Height	Width	Height	Width
Painting	86.7	40.2	87	40.5
Mounting	148.4	52.7	159.4	56.7

## 3. Format, mounting materials

	Before treatment	After treatment
Format	Hanging scroll (Buddhist style mounting)	Hanging scroll (Buddhist style mounting)
Inner border	Silver brocade with a circle pattern on a brown background	Gold brocade with a medium-size peony and arabesque pattern with double vines on a reddish brown background
Outer border	Twill weave silk with an arabesque pattern on a light green background	Twill weave silk with a cloud patterns on a brown background
Roller knobs	Gold plated roller knobs with an arabesque pattern	Gold plated roller knobs with lotus pattern
First Lining	<i>Kōzo</i> paper	<i>Mino</i> paper (Made by Hasegawa, Mino)
Subsidiary lining (first layer)	<i>Kōzo</i> paper	<i>Misu</i> paper (Made by Uekubo, Yoshino)
Subsidiary lining (second layer)	—	<i>Misu</i> paper (Made by Uekubo, Yoshino)
Final Backing	<i>Kōzo</i> paper	<i>Uda</i> paper (Made by Fukunisi, Yoshino)
Mending silk	—	Irradiated silk (Warp thread: 60 strands per 3.03cm, 31 denier, Weft thread: 80 double-strands per 3.03cm, 31 denier)
Reinforcement strip	—	<i>Mino</i> paper (Made by Hasegawa, Mino)
Storage Box	—	Paulownia <i>yarō</i> box with a large paulownia roller clamp Made by Kuroda, Kyoto)



#### IV. Condition before treatment

1. Many horizontal creases were found on the painting, and the tips of the creases were missing or otherwise damaged due to abrasion.
2. Grime and stains due to aging were found throughout the surface of the painting, creating an unpleasant appearance.
3. The adhesion of the paint layer had weakened and the pigments were in danger of flaking off.
4. The silk support of the painting had separated from the first lining paper and was only attached at one end of the painting (Fig. 5).
5. Pigments on the reverse side of the painting (*urazaishiki*) were found attached to the first lining paper. The first lining was also found attached to the painting upside down.
6. The mounting fabric was severely soiled and damaged, and was torn at the top stave and bottom roller (Fig. 6).
7. The gold plated roller knob on the right side was missing and a part of the knob of the left hand side was also missing (Fig. 7).

#### V. Treatment plan

The main concerns during this treatment are the soiling and creases found throughout the painting and the lifting of the lining papers. Therefore, the basic approach of the treatment plan is to stabilize the painting by remounting it into a hanging scroll format by removing the grime found on the silk support of the painting through a cleaning process, consolidating the paint layer, and replacing the lining papers.

##### 1. Painting

- a. Consolidate the paint layer using an animal skin glue solution in order to strengthen the adhesion.
- b. Remove the grime attached to the surface of the painting using filtered water.
- c. Mend the missing areas of the silk support of the painting using irradiated silk.
- d. Remove a thin *Mino* paper to a tone that matches that of the original silk support and attach it as the new first lining.
- e. Tone the mended areas so that they match the base color of the painting.

##### 2. Mounting fabric

- a. Replace the mounting fabrics with a new materials, as it is severely soiled and deteriorated.
- b. The artwork will be mounted in the same format as before this treatment; a in the form of hanging scroll in a Buddhist style mounting.
- c. Prepare new gold-plated roller knobs, top stave, bottom roller and cords.

##### 3. Storage Box

- a. Construct a new paulownia yaro box with a large paulownia roller clamp, paper box cover, folding paper *chitsu* case, and habuta-e silk wrapping.

## VI. Treatment process

### 1. Pre-treatment examination

Photographs were taken to record the pre-treatment condition, damage, etc. of the scroll.

### 2. Disassembly

The hanging scroll was disassembled and all the old lining papers, with the exception of the first lining paper, were removed.

### 3. Cleaning

First, dust found on the surface was carefully removed with a brush and suctioning device.

Then, stains were removed by spraying filtered water onto the front surface of the painting and allowing it to seep through the painting and in the blotter paper (*suitori-gami*) placed underneath the painting.

### 4. Consolidation of the paint layer

The first consolidation treatment was performed by spraying a 0.5% solution of animal skin glue onto the paint layer.

Later, another consolidation treatment was performed by applying a 2 or 3% solution of animal skin glue with a brush and allowing it saturate each paint layer.

### 5. Mending silk

Missing areas of the silk support of the painting were mended with irradiated silk.

### 6. First lining

Thin *Mino* paper was applied as the first lining using wheat starch paste.

### 7. Subsidiary lining

*Misu* paper was applied as a subsidiary lining using wheat starch paste that has been kept in a cool, dark place for ten years (hereafter referred to as "aged wheat starch paste").

### 8. Reinforcement strips

Thin *Mino* paper reinforcement strips of approximately 2 mm in width were applied to areas of horizontal creases and potential creases using a wheat starch paste.

### 9. Preparing mounting fabric

"Virtual" matching of mounting fabrics was conducted on a computer. In consultation with the supervisor, various combination of mounting fabrics were visualized to determine the combination that would best compliment the painting.

Each of the selected mounting fabrics was lined with thin *Mino* paper using wheat starch paste, after which a subsidiary lining made of *misu* paper was applied using an aged wheat starch paste.

### 10. Assembly

The painting and mounting fabrics were assembled into a hanging scroll format.

### 11. Overall lining

*Misu* paper was attached as the overall lining using aged wheat starch paste, and the mounted painting was stretched and dried on a *karibari*.

### 12. Application of the final backing

*Uda* paper was applied as the final backing using aged wheat starch paste.

### 13. Drying on *karibari*

The painting was stretched face-up (*omotebari*) and allowed to completely dry.

### 14. Toning

Areas in which new mending silk was applied were toned to match the base color of the painting.

#### 15. Drying on karibari

The painting was stretched face-down on karibari (urabari) for over a month to ensure that it was completely dry.

#### 16. Finishing

New gold plated roller knobs (Fig.8), top stave, bottom roller and cords were prepared and attached to the mounting to complete hanging scroll.

The scroll was wrapped in a habuta-e silk wrapping and placed in a new paulownia *yaro* box with a large paulownia roller clamp (Fig9).

A new paper box cover and folding paper *chitsu* case were made.

#### 17. Documentation

Post-treatment photographs were taken and a report on this treatment was compiled.

### VII. Notes

Ideally, the pigments applied to the reverse side of the painting (*urazaishiki*) that became attached to the former first lining should be placed back where they came from on the silk support of the painting. However, in the case of this painting, the old first lining had become detached from the silk support, and remained in the condition for a considerable amount of time. In addition, for a time in the past, the old first lining had been reattached to the silk support upside down, creating a double layer of *urazaishiki* pigments in the same area of the old first lining, but with the image positioned in opposite directions (Fig4). Therefore, considering the possible stress that the returning of the pigments back to their original locations on the silk support could cause to the painting, the decision was made to not reattach the old first lining onto the silk support nor return the *urazaishiki* pigments that were attached to the old first lining back onto the painting support. The old first lining with the attached *urazaishiki* was to be stored separately with the old mounting fabrics.

Translated by Amy McCaleb (Urban Connections), edited by OKA Yasuhiro and Regina Belard

## 作品解説

東京文化財研究所  
津田徹英

長方形にあらわされた星曼荼羅の一作例である。三重の枠で区画して、内院、中院、最外院を構成し、枠内には、それぞれ白地の円形のなかに星の精が配されている。

すなわち、内院は青を背景色として、九曜星のうち、丑に乗った老人の姿であらわされた土曜星を中央に配し、これより上半分の中央には、海中より出現した須弥山をあらわす岩座（人頭をもつ二匹の龍王がその根本に巻き付く）の上に、唯一例外的に赤の円形を大きくあらわし、その中にやや大き目に金輪釈迦如来坐像を描く。

内院の下半分には通例、北斗七星に小さくあらわした輔星を加えた八星を描くが、本図ではさらに三星を加える点が異色である。いずれも中国風の冠・服を纏い、胸前で笏を執り、輔星のみ日本風の衣冠装束の姿となる。

内院の上下に配された金輪釈迦と北斗七星群の周囲には九曜星のうち、残りの八つの星を配する。その最上辺には、向かって右から五頭の馬を座として赤い日輪を抱く日曜星、手に筆記用具をもつ水曜星、6羽の鵝鳥を座として白い月輪を抱く月曜星を配し、いずれも女性の姿となる。最下辺には三つの頭をもつ鬼神形の二つの蝕星の間に四本の腕をもち忿怒の男姿であらわれた火曜星を配する。さらに、金輪釈迦の岩座の右左において胸前で両手を組んだ木曜星と琵琶を奏でる金曜星を配する。この二体も女性の姿であらわされる。このように眺めるとき、九曜星のうちの土曜星が内院中央に位置していることも他の長方形の星曼荼羅には見ない特異な配置といえる。

中院は、緑を背景色として、十二宮が四辺に三星ずつ配されている。下辺中央から時計周りに獅子、蟹、牛、男女の姿で描かれた夫婦、羊、双魚、怪魚の姿であらわれた摩羯、宝瓶、弓、蝎、秤量、二人の女性で描かれた双女の順に巡らされる。なお、その方位を示しておく、真下の獅子が北を示すことになる。ただし、通例の配置だと真上の宝瓶が南を示して、その次に摩羯が配されるが、本作では両者が入れ替わっている。

最外院は赤色を背景色とし、二十八星宿が四辺に七星ずつ配されている。これは陰暦において二十八日周期で月が満ち欠けをすることを、月が毎晩泊り巡る星の宿として観念されたものである。

このような長方形の星曼荼羅は、十一世紀末の日本の真言密教教団のなかで考え出されたとされている。本図もその形式を受け継ぐものであるが、その彩色等を考慮して、製作は江戸時代と考えるのが穏当であろう。ただし、詳しく眺めてみると、九曜星や二十八星宿の図像表現には、いずれも平安末期風を留めるところがあり、製作に際し、古い星曼荼羅を参考にしたようにも思われる。本作は長方形の星曼荼羅の遺例として記憶すべき作例といえる。

### 〈参考文献〉

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- ・TSUDA Tetsuei “Images of Stars and their Significance in Japanese Esoteric Art of the Heian Period,” *Culture and Cosmos*, vol.10 nos. 1 and 2 (2007)

*Star Mandala*

## Description of Artwork

Tetsuei Tsuda  
National Research Institute for Cultural Properties, Tokyo

This scroll shows an example of a rectangular Star Mandala. It is rectangular in structure and is made up of three concentric sections: the first court, second court and the outer court. Each court contains a row of white circles. Within each circle resides a star spirit.

The first court has a blue background on which eight luminaries are arranged with Saturn, an old man sitting on an ox, at the center. At the center of the top half of the court is a sacred rock symbolizing Mt. Sumeru, rising out of the ocean. Wrapped around the foot of this rock are two twisting dragons with human heads. Above the sacred rock is the only red large circle, within which sits a fairly large image of Buddha Sakyamuni of Golden Wheel.

Typically, the bottom half of the first court shows eight stars, made up of the Big Dipper and small assisting star. This scroll, however, is quite unusual in that it includes three additional stars. The main figures are dressed in Chinese-Taoism style cap and clothing, and are holding a scepter at their chest, while the assisting stars are dressed in formal Japanese style court wear.

Around the Buddha Sakyamuni of Golden Wheel and the group of Big Dipper situated at the top and bottom of the inner court are remaining eight of the nine Luminaries. At the very top, from right to left, are the sun, who holds a red disc and sits on five horses; Mercury, holding a writing utensil in her hand; and the moon, who holds a white disc and sits on six geese. All of these figures are female. At the very bottom are two three-headed monster-style Rahu, in between which is Mars, a wrathful male figure with four arms. Further, on the right and left sides of Buddha Sakyamuni of Golden Wheel are Jupiter, who crosses her arms in front of her chest, and Venus, who plays the *biwa*, a Japanese lute. Both of these are also depicted as female figures. Of the nine Luminaries, Saturn is located at the central section of the court. This is highly unusual and not found in other rectangular Star Mandalas.

In the second court, the zodiac signs are lined up on four sides, three signs on each, on a green background. From the bottom center, in a clockwise direction, are Leo, Cancer, Gemini depicted as a husband and wife, Taurus, Aries, Pisces, Capricorn in the form of a beastly fish, Aquarius, Sagittarius, Scorpion, Libra, and Virgo shown as two women. Judging from the arrangement, Leo at the very bottom represents north. In a normal layout, Aquarius at the top shows north and next to that is Capricorn. In this scroll, however, the position of these two is switched.

The outer court has a red background. The Twenty-eight Lunar Mansions are arranged on four sides, seven mansions on each. These are the twenty-eight stars at which the moon rests each night while completing its circuit in twenty-eight days according to the lunar calendar.

This style of rectangular Star Mandala format is said to have developed in the Shingon School at the end of the 11th century. While this scroll is created in the same style, judging from such factors as colors used, it would be most reasonable to assume it was produced during the Edo period. However, upon closer examination, the style of expression used for such figures as the nine Luminaries and Twenty-eight Lunar Mansions hints of the style of the end of the Heian period. It appears as if old mandalas may have been used as reference. It is a piece that should be remembered as one of the rectangular Star Mandalas.

Translated by Amy McCaleb (Urban Connections)



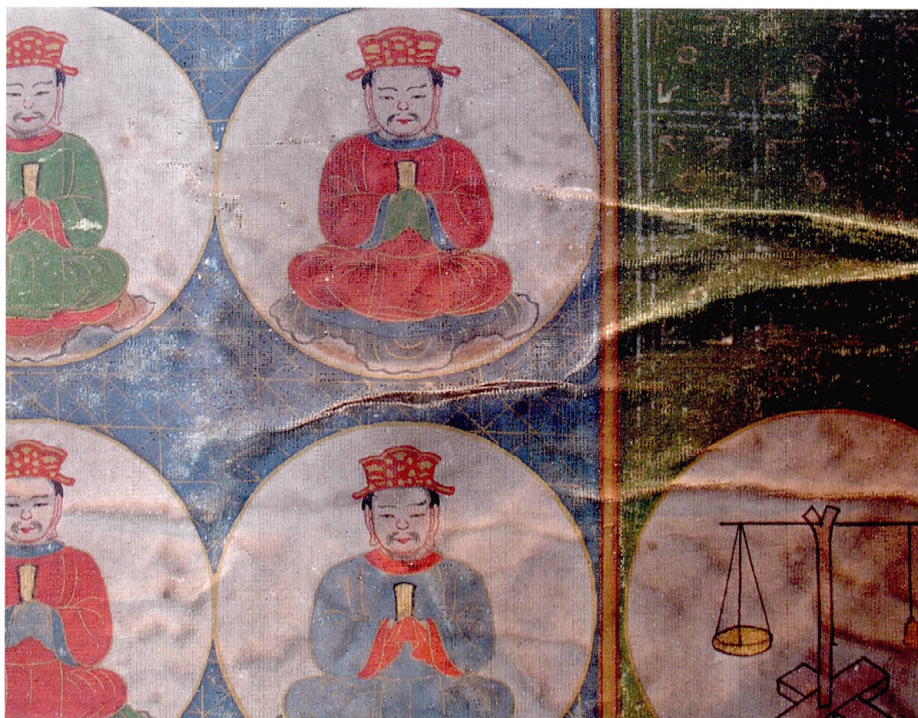


(1)-1 修復前 Before treatment

(1)-2 修復後 After treatment

2 星曼荼羅 (バンクーバー博物館)  
*Star Mandala* Vancouver Museum, Canada





(2)-1 修復前 (部分) 折れと磨損  
Before treatment (Detail): creases and abrasion



(2)-2 修復後 (同上)  
After treatment (Detail of the same area)





(3)-1 修復前 (部分) : 画面全体に経年に起因する汚れやシミが付着して、鑑賞の妨げとなっていた。  
Before treatment (Detail): Grime and stains due to aging were found throughout the surface of the painting, creating an unpleasant appearance.



(3)-2 修復後 (同部分) After treatment (Detail of the same area)