

## A Technical Study of a Painting by Suzuki Harunobu at the Museum of Fine Arts, Boston: Artist's Palette and Techniques

### ABSTRACT

Suzuki Harunobu (1724–1770) is renowned as one of the first *ukiyo-e* print artists to employ full-color printing. Although he was a prolific designer of prints, few paintings by the artist exist today. One of the surviving examples, *Spring Outing on the Banks of the Sumida River*, is in the collection of the Museum of Fine Arts (MFA), Boston, and was treated for the exhibition *Drama and Desire: Japanese Paintings from the Floating World 1690–1850*. In order to better understand Harunobu's painting techniques, the Asian Conservation Studio at the MFA conducted an analysis of the pigments used. The project involved researching Harunobu's palette for this particular painting using nondestructive micro-x-ray fluorescence (XRF), Fourier transform infrared spectrometry (FTIR), and polarized light microscopy (PLM). The pigments found were as follows: indigo, smalt, azurite, lead white, and vermilion. The project also explored how the painting might have looked prior to an earlier treatment, using techniques such as visible, ultraviolet, and infrared light examination to reveal information that is barely visible to the unaided eye, and comparing these results with an early twentieth-century woodcut reproduction from the Japanese art history journal *Kokka Gakkai Zasshi*.

### INTRODUCTION

Suzuki Harunobu (1724–1770) was a prolific artist and one of the first *ukiyo-e* print artists to employ full-color printing. However, little information on paintings by Harunobu has been available, perhaps due to the relatively few

paintings he made and the even fewer that survive today. One such example, *Spring Outing on the Banks of the Sumida River* (fig.1), in the collection of Museum of Fine Arts (MFA), Boston, was treated for the exhibition *Drama and Desire: Japanese Paintings from the Floating World 1690–1850*. The remounting provided a rare opportunity to examine the painting on both recto and verso. The aim of this project was to document the condition of this painting and to investigate the artist's technique and materials.

### CONDITION

The painting was in brittle condition with a discolored silk support and many disfiguring infills. It had sustained extensive loss in both the support and the media. In a past treatment, the painting had been removed from its hanging scroll format and mounted on a framed panel with a gold-leaf border, so that it could be hung like a Western-



Fig. 1. Suzuki Harunobu, *Spring Outing on the Banks of the Sumida River* (Museum of Fine Arts, Boston). For pigment analysis figures 1–6 are numbered from left to right. Photo: Asian Conservation Studio, MFA, Boston.



Fig. 2. Detail of kimono in ultraviolet light. Photo: Asian Conservation Studio, MFA, Boston.



Fig. 3. Detail of kimono in visible light. Photo: Asian Conservation Studio, MFA, Boston.



Fig. 4. Detail of printed reproduction. Photo: *Kokka Gakkai Zasshi*, vol. 49, 1893.

style painting. The edges of the losses were trimmed and filled with thick, darkly toned silk inserts. Perhaps to compensate for extensive media abrasion and loss, areas of the painting had been overpainted with white paint in some areas which stood out against the overall aged background.

A woodblock print reproduction of the painting was found as an illustration in *Kokka Gakkai Zasshi*, a Japanese art journal in publication since the Meiji period. Although the 1893 article (vol. 49) did not provide much information on the artist's techniques, the print, possibly a direct copy of the painting, served as a point of reference for possible original colors in the painting. The print also appears to reflect the condition of the painting at an earlier time,

which is helpful for visual comparison to further identify the areas of restoration.

Ultraviolet light reveals the original design on a garment, only minute traces of which remain as the rest has been abraded away. An example is shown of the kimono of figure 6 on the far right of the painting (fig. 2). In normal light, only the base white of the kimono is visible in the image of the same area (fig. 3). Interestingly, in the 1893 print the kimono shows a modified version of this design (fig.4).

Infrared Reflectography (IR) confirmed that Harunobu worked meticulously in both his prints and paintings. An example of the original line design is seen in a detail of the



Fig. 5. IR image of the fisherman located near figure 1.

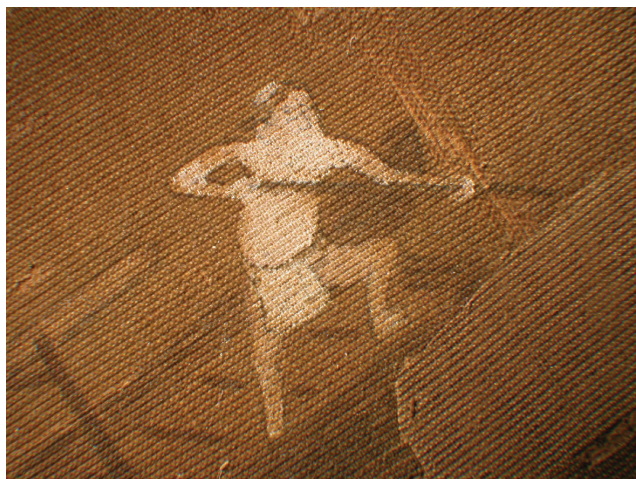


Fig. 6. Visible light image of the fisherman located near figure 1. Photo: Asian Conservation Studio, MFA, Boston.

Table 1. Pigment analysis results for Harunobu's *Spring Outing on the Banks of the Sumida River*

NO.	SAMPLE AREAS*	XRF	FTIR	PLM
1	Surface scraping of the unpainted support		Protein, cellulose, and starch	
2	White on 6th figure	Cu, Ca, Sr		
3	White stripe on 6th figure		Calcite and starch	
4	White collar on 4th figure	Cu, Ca, Sr, Fe		
5	White sash on 4th figure	Ca, Sr		Vermilion particles were found in the paint
6	White robe on 2nd and 3rd figure		Calcite and starch	
7	Blue robe on 2nd figure	As, Co, Sr		Smalt
8	Blue robe on 3rd figure	Cu, Ca		
9	Dark blue robe on 3rd figure		Calcite and starch	Black particles with irregular shapes
10	Top blue robe on 3rd figure		Indigo, calcite, starch	Dark organic blue
11	Red robe on 3rd figure	Hg, S		Vermilion
12	Red on 2nd figure		Calcite and starch	Vermilion
13	Purple on 4th figure		Calcite, starch, protein	Vermilion and organic blue

\*The six figures in the painting are numbered from left to right.

fisherman on the far left using infrared light (fig. 5); the same area under the visible light is obscured by the overpaint (fig. 6).

#### ANALYSIS AND RESULTS

The techniques for pigment identification employed in the study include nondestructive micro-x-ray fluorescence (XRF), Fourier transform infrared spectrometry (FTIR), and polarized light microscopy (PLM). The analysis was carried out by Richard Newman and Michele R. Derrick, conservation scientists at the MFA, Boston (table 1).

In this particular painting, indigo and azurite were found as separate paint layers over a layer of calcium carbonate. Harunobu appears to have selectively applied a white opaque layer prior to the application of another color.

The later overpaint appears to be less homogeneous than the original white paint; under magnification, random red vermilion particles were found in the overpainted areas using PLM. It is possible that the presence of vermilion results from the use of a contaminated brush by the restorer.

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