

Science and Technology Group Annual Report FY2018

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1 Introduction

The goal of the Art Conservation Program at OIST is to contribute to the preservation and understanding of Okinawan material culture through collaborations with local cultural institutions such as the Yuntanza Museum, the Naha City Museum of History, and the Okinawa Prefectural Museum & Art Museum. Collaborative work with other OIST research units as well as with conservation professionals from abroad is ongoing. In particular, this year Anya went on an extended research trip to the Chhatrapati Shivaji Maharaj Vastu Sangrahalaya Museum in Mumbai. In FY18 our work largely consisted of performing conservation treatments to preserve cultural artifacts, and advancing our use of Reflectance Transformation Imaging (RTI).

2 Activities and Findings

Conservation Treatments of Yuntanza Museum Artifacts

- *Coin*, China, 1111 A.D., No Acc.# (OIST 172): The archaeological copper alloy coin was broken in many pieces and heavily corroded (Fig. 1). The coin was reconstructed (Fig 2). The corrosion products were analyzed using Raman Spectroscopy and FTIR. RTI was performed (Fig 2).

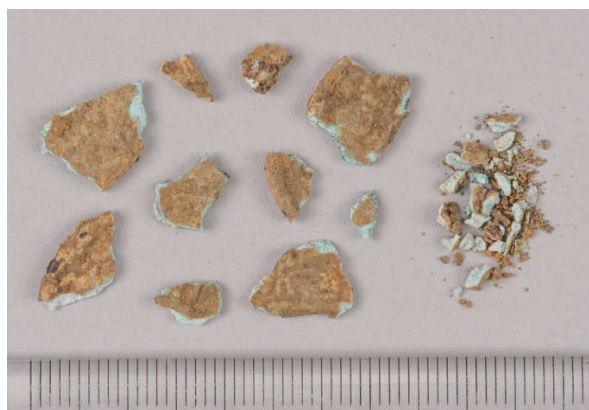


Fig. 1: *Chinese Coin*, Owner: Yuntanza Museum, before treatment, photo by Cassia Balogh

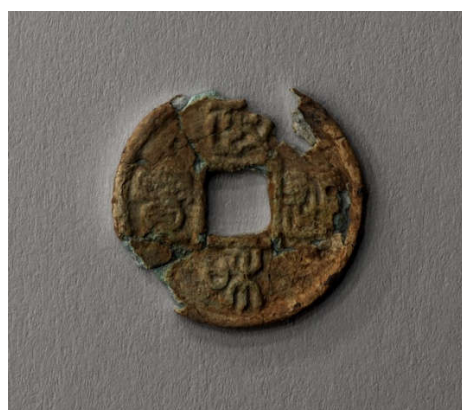


Fig. 2: *Chinese Coin*, Owner: Yuntanza Museum, after treatment RTI image, photo by Cassia Balogh

- *Ceramic Jar*, Okinawa, 12th-16th century, No Acc# (OIST 167): This archaeological jar was cleaned and reconstructed in FY17. In FY18 the reconstruction was completed and a supportive fill was created.
- *Spike (Kugi)*, Okinawa, 12th century, Agarinugan 44: The iron alloy spike was heavily corroded, broken, and fragile. The fragments were cleaned both chemically and mechanically. The surfaces were chemically stabilized. The fragments were reconstructed.
- *Arrowhead (Yajiri)*, Okinawa, 12th century, Agarinugan 60: The heavily corroded iron alloy arrowhead was mechanically cleaned and the surfaces were chemically stabilized.

Conservation Treatments of Chhatrapati Shivaji Maharaj Vastu Sangrahalaya (CSMVS) Artifacts

- *Nested Incense Box*, Japan, Acc.# 22.823: The lacquer surfaces were cleaned and the detached floral appliqués were reattached.
- *Oblong Box*, Japan, Acc.# 22.829: The old restoration materials were reduced, the lid was stabilized, and the exterior lacquer surfaces were cleaned.
- *Inro with farmer's instruments motif*, Japan, Acc.# 33.607: Unstable areas of lacquer were humidified and consolidated. The modern string was replaced.

Asian Lacquer at the CSMVS

Anya visited the CSMVS Museum Art Conservation Centre from Dec 24, 2018-March 15, 2019. The CSMVS is a world-class museum in Mumbai with a large and diverse art collection. Anya's work largely concentrated on the CSMVS Japanese lacquer collection. There are approximately 800 Japanese objects at the museum, which are part of the Tata Collection. Anya was able to share her expertise on Asian lacquer with the CSMVS. She surveyed objects, both those on view and those in storage. She provided recommendations on the lighting and exhibition of the lacquer objects and

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consulted with CSMVS curatorial, exhibit prep, and conservation staff. 11 Japanese lacquer artifacts from storage were chosen for research and/or treatment purposes. Anya treated 3 of the artifacts with the assistance of CSMVS conservation staff. Lastly, Anya also gained knowledge of Indian art and Indian conservation practices while at the CSMVS.

Reflectance Transformation Imaging (RTI)

RTI is a photographic method that captures a subject's surface shape and color. It allows for interactive, virtual relighting of an artifact on a computer.¹ RTI helps highlight artifact condition issues or can enhance inscriptions. RTI was captured for the Chinese coin (Yuntanza Museum, No Acc.#, OIST 172). The resulting image allowed for the identification of the coin by the museum. This information has been used to help date the important archaeological site from which it was excavated. RTI was also captured of the Ankokuzan-jukamoku-kihi monument from the Okinawa Prefectural Museum. Dating to 1427, it is the oldest stone monument in Okinawa. Its inscriptions have been damaged, but describe activities of Ryukyu King Sho Hashi. RTI helped to increase the legibility of the remaining characters as well as provide information on the character alignment.

3 Collaborators & Visitors to the Art Conservation Program

- **Mirijam Neve**, Illustrator and Artist, visited on April 2 and 4, 2018 to give a workshop on "Digital Photography for Art Conservation."
- **Cassia Balogh**, Graduate Intern, Winterthur/University of Delaware Program in Art Conservation, visited from June 11-September 24, 2018. Cassia's activities included the conservation treatment and study of Okinawan artifacts as well as assisting with RTI of a large stone monument.

4 Publications and other output

- *Introduction to the Conservation of East Asian Lacquerware: An Okinawan Perspective*. Presented at the Chhatrapati Shivaji Maharaj Vastu Sangrahalaya Museum – January 22, 2019.
- *Art Conservation at OIST, Introduction to Reflectance Transformation Imaging* – Presented at the Okinawa Prefectural Museum & Art Museum – July 30, 2018.

Art Conservation Treatment Proposals & Final Reports

- Balogh, C. "Coin: Artifact Exam & Trmt Proposal", No Acc.# (OIST 172), Yuntanza Museum, 2018.
- Balogh, C. "Coin: Final Trmt Report", No Acc.# (OIST 172), Yuntanza Museum, 2018.
- Balogh, C. "Ceramic Jar, Final Trmt Report", No Acc.# (OIST 167), Yuntanza Museum, 2018.
- Dani, A. "Spike, Artifact Exam & Trmt Proposal", Agarinugan 44, Yuntanza Museum, 2019.
- Dani, A. "Spike, Final Trmt Report", Agarinugan 44, Yuntanza Museum, 2019.
- Dani, A. "Arrowhead, Artifact Exam & Trmt Proposal", Agarinugan 60, Yuntanza Museum, 2019.
- Dani, A. "Arrowhead, Final Trmt Report", Agarinugan 60, Yuntanza Museum, 2019.
- Balogh, C. "Glazed Stoneware Bottle: Artifact Exam & Trmt Proposal", No Acc.#, Taro Kuranari, 2018.
- Balogh, C. "Glazed Stoneware Bottle: Final Trmt Report", No Acc.#, Taro Kuranari, 2018.
- Balogh, C. "Porcelain Bottle: Final Trmt Report", No Acc.#, Taro Kuranari, 2018.
- Dani, A. "Nested Incense Box: Proposed Treatment", Acc.# 22.823, CSMVS, 2019.
- Dani, A. "Nested Incense Box: Treatment Record", Acc.# 22.823, CSMVS, 2019.
- Dani, A. "Oblong Box: Proposed Treatment", Acc.# 22.829, CSMVS, 2019.
- Dani, A. "Oblong Box: Treatment Record", Acc.# 22.829, CSMVS, 2019.
- Dani, A. "Intro with farmer's instruments motif: Proposed Treatment", Acc.# 33.607, CSMVS, 2019.
- Dani, A. "Intro with farmer's instruments motif: Treatment Record", Acc.# 33.607, CSMVS, 2019.

¹ Cultural Heritage Imaging. <http://culturalheritageimaging.org/Technologies/RTI/> Accessed July 31, 2018.