The Kyrenia Ship Conservation Project

Kyrenia Ship Collection:

Conservation Progress Report

May 2016


Photographs courtesy of Veronica Ford and Cassy Cutulle, 2016

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General Introduction

Throughout May, the conservators have worked to continue desalination of the smaller ceramics in preparation for reconstruction and restoration. Additionally, the conservators tested materials for the reconstruction and restoration of the ceramics. Using the knowledge gained from this experimentation, the conservators proceeded to successfully reconstruct several ceramic objects. Throughout this work, preventive activities such as logging temperature and relative humidity and integrated pest management, was continued. Lastly, supplies are being purchased on a rolling basis to ensure the Laboratory remains adequately stocked.

May 2016: Conservation Tasks in Progress

Preventive Conservation Tasks

In May, Veronica and Cassy continued to monitor and log the relative humidity and temperature at the Conservation Laboratory in Nicosia. Data from the monitors placed within the object cupboards were recorded, as well as data for the outdoor conditions, which was retrieved from "Weather.com". The same recording schedule was utilized as previously: logging of relative humidity and temperature took place four times a week—two recordings on Monday and Friday mornings and afternoons at approximately 9:00am and 2:00pm. The graphs for this month will be included in the June report, where a more comprehensive comparison between seasonal changes can be viewed.

Additionally, supplies have been purchased for future activities at the Conservation Laboratory, which will allow us to proceed forward with minimal delays.

Remedial Conservation Tasks

During the end of April and beginning of May, objects from the second group of ceramics transported from Kyrenia Castle were deconstructed. This entailed introducing solvents such as acetone and deionized water into the joins of the previously reconstructed ceramics. The solvents were applied either by pipette or through placing the object in a solvent-rich atmosphere. These objects were reconstructed in around 1970 and deconstruction was now necessary since the joins were failing due to aged adhesive and previous storage conditions.

Desalination also continued as previously conducted: 3 batches of ceramic objects were placed in baths of deionized water which were changed on a daily basis every day for one week, with the exception of the weekend days. The first of these baths was made up of a 1:1 ratio of tap water and deionized water. Subsequent baths were made up of entirely deionized water. The conductivity of the desalination bath water was checked each day using a Thermofisher Scientific "total dissolved solids", or TDS/conductivity meter, which measured the conductivity of the water in micro-Siemens and provided a temperature for the water. When the conductivity reached an appropriate endpoint–approximately 70-100 micro-Siemens—the desalination was completed and the object removed from the water and slowly dried. This endpoint was reached after 7 days of soaking for most of the objects. In all, 8 objects were successfully desalinated which marks the completion of the desalination of the first group of ceramics objects in the Laboratory.

After desalination, the ceramics were placed in high-humidity atmospheres so as to encourage a slower, safer drying of the material. This was done through placing the damp ceramic in a polyethylene container with a cling-film seal. After 1 day, holes were pierced in the film and after 2 days it was removed entirely to gradually reduce the humidity and promote further drying. Weighing of the ceramics took place after 1 week of drying to assess whether or not drying was completed. When the weights of the ceramics plateaued, they were considered to be dry. This normally occurred after 1.5-2 weeks of drying time.

Fig. 1: Photograph of Veronica Ford preparing the ceramics for drying (Photograph courtesy of Cassy Cutulle, 2016).

As desalination and drying has been completed for some of the ceramics, plans and the testing of materials for the reconstruction and restoration of these objects has been carried out. First, a list was created to detail which ceramic objects will be reconstructed and restored and to what degree. This list will be used to consult with the Project Team about future restoration plans.

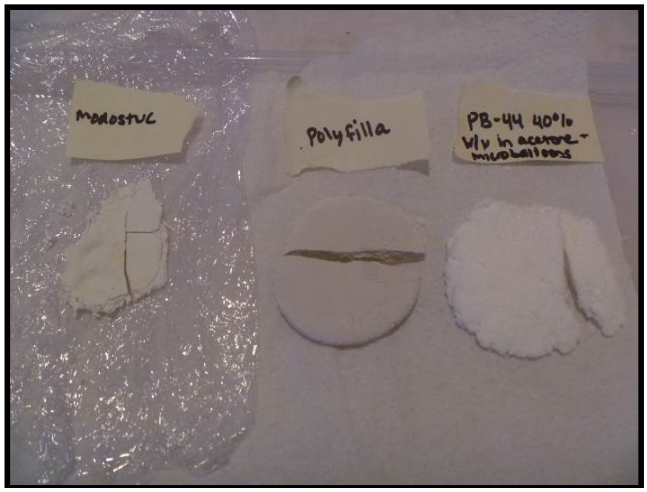

Fig. 2: Photograph of three types of filling materials tested for restoration (Photograph courtesy of Cassy Cutulle, 2016).

After this list was created, the conservators started testing materials such as archival-quality adhesives and filling materials on test-ceramics (modern ceramics). These tests revealed that Paraloid B-44 at 40% concentration w/v in acetone was the most appropriate adhesive for reconstructing the ceramic objects. Additionally, filling-material tests indicated that the best type of material for structural fills to support weak join areas would be Paraloid B-44 at 40% concentration w/v in acetone with glass microballoons. For larger areas of loss, some objects will be restored with plaster. Thus far, 4 objects have been successfully reconstructed using the methods described above.

Fig. 3: Photograph of Cassy Cutulle reconstructing ceramic P85 (Photograph courtesy of Veronica Ford, 2016).

Fig. 4: Photograph of Veronica Ford reconstructing ceramic P126 (Photograph courtesy of Cassy Cutulle, 2016).

Fig. 5: Photograph of ceramic P104 after reconstruction. The purple bandage was placed over the object to provide tension while the adhesive set (Photograph courtesy of Cassy Cutulle, 2016).

June 2016: Projected Work Plan

In June, the conservators will carry out consolidation and desalination of the second group of ceramic objects which was transported to the Conservation Laboratory in mid-April. Simultaneously, the conservators will be in collaboration with the Project Team to develop plans for the restoration of the ceramics. Reconstruction of the first group of ceramics will also continue, as will preventive conservation activities and supply ordering.

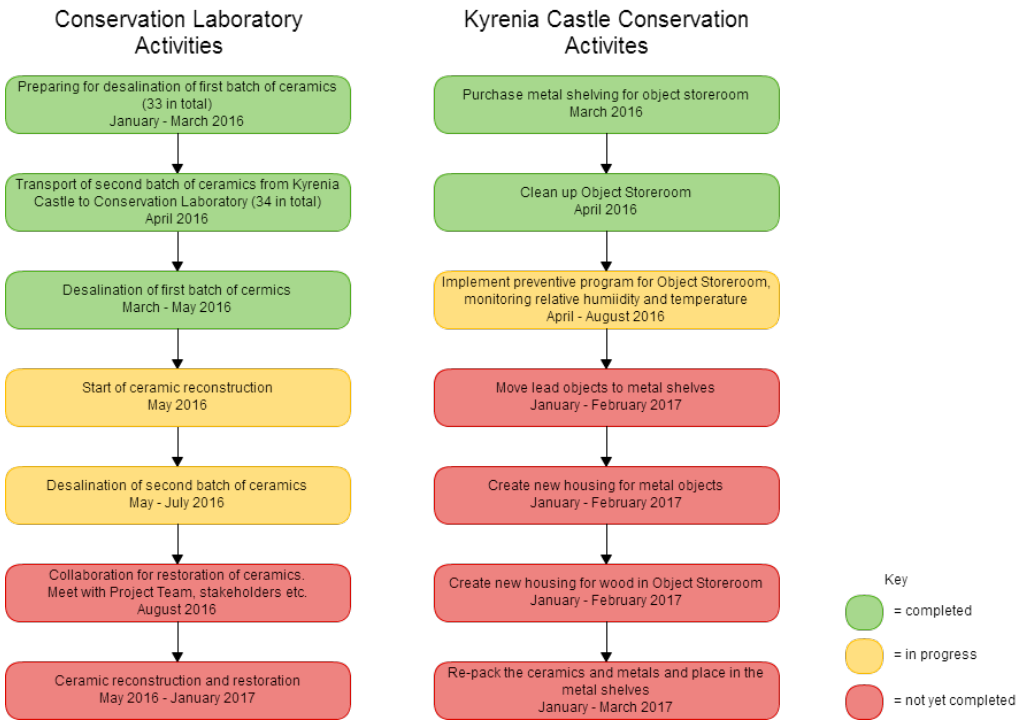

Fig. 6: Flow chart displaying the activities to be undertaken by the conservators for this Project and the progress made thus far (Flow chart courtesy of Veronica Ford, 2016).