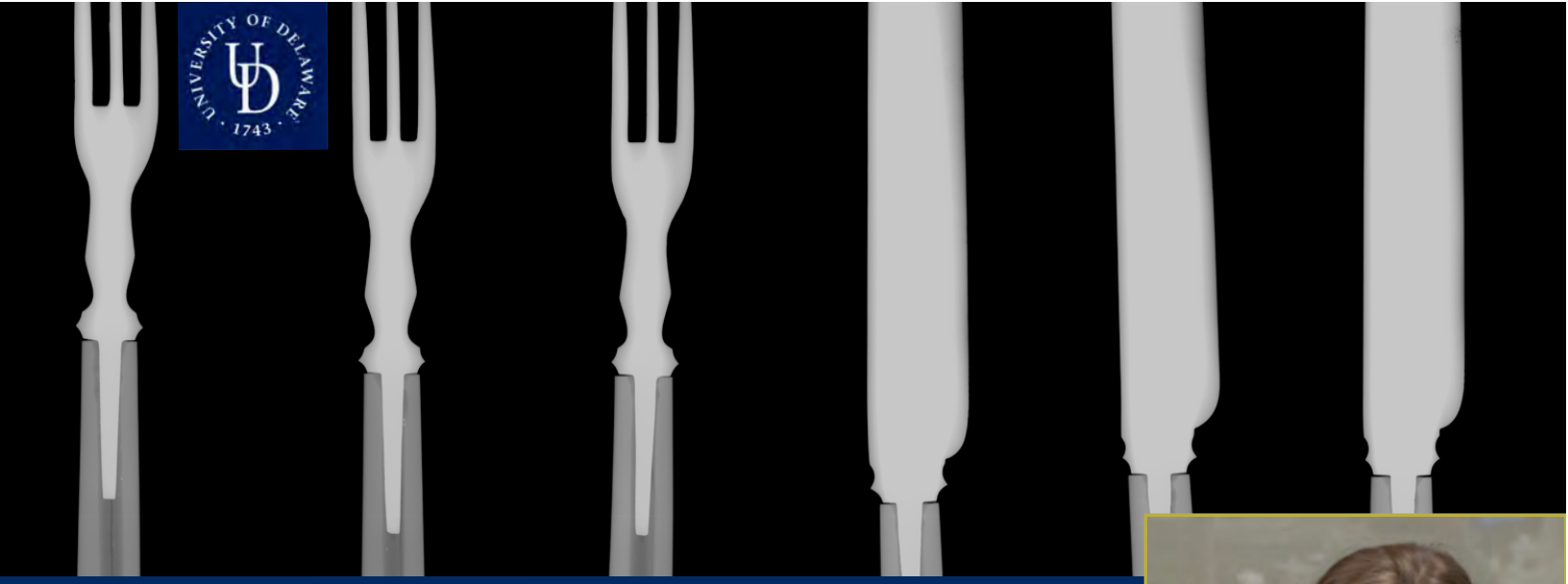
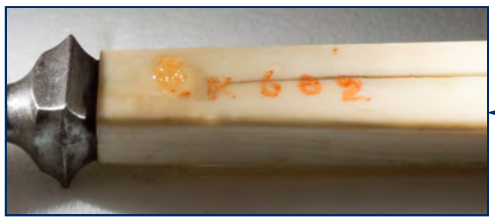


Art Conservation *and the markings of time*

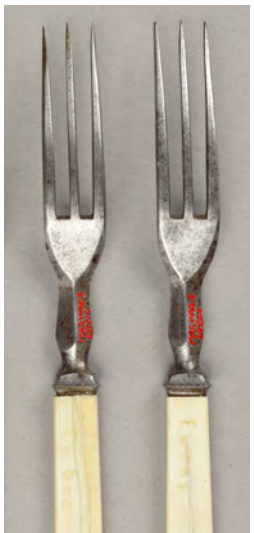
Although it was not illegal in the 19th century—as it is in most cases today—to import elephant ivory, the material was rare, exotic to early Americans, and highly valued. So when Winterthur/University of Delaware Program in Art Conservation (WUDPAC) Fellow Jessica Chasen began treating six ivory-handled knives and forks from the Winterthur Museum's collection, she thought it likely that the cutlery once belonged to a well-to-do family who deliberately chose ivory rather than the horn- or bone-handled sets also available at the time.



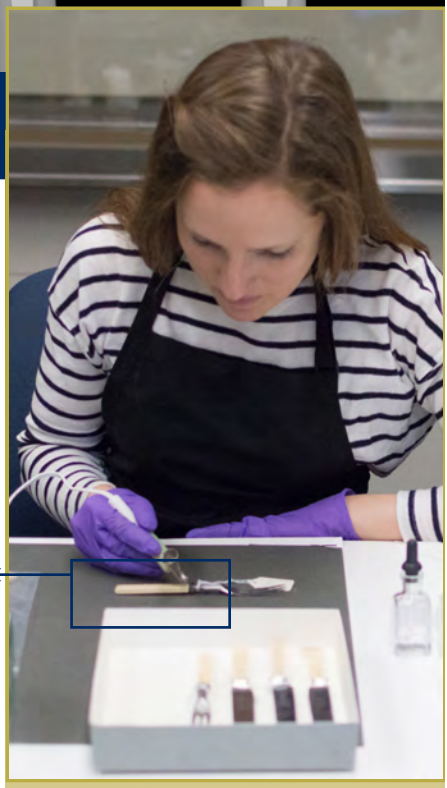
Jessica believes the three knives and three forks, which have steel blades and tines and appear to come from a matched set, date from the mid-19th century. They were made by a firm called Horton & Co. in Sheffield, England, and were once displayed in the museum's Pine Kitchen, a historical room that was deinstalled and transformed into the Kirshner complex.

The steel components of the knives and forks had developed uneven patches of corrosion. Through x-radiography, Jessica discovered that the ivory had been drilled well below the tang, the hidden piece of steel anchored in the handle, so that a lead counterweight could be placed inside the tip of each handle. While this may have made the utensils more comfortable for users, the combination of the thinned ivory, corroding steel, and additional lead helped produce cracks running down the length of each handle.

Jessica cleaned the surfaces with soft bristle brushes and a HEPA vacuum, and then gently rubbed the blades and tines with soft abrasive papers and a slow-evaporating solvent to reduce the corrosion. She then cleaned the ivory handles using the novel solution of a water-containing gel based on the work of Professor Richard Wolbers. To ensure that water did not reach the interior of the handle and cause more corrosion of the steel, she first applied cyclododecane as a temporary barrier around the top rim of each handle and within the cracks. After cleaning, she filled each crack with a pigmented wax so that the cracks would no longer be obtrusive and matched the surrounding ivory surface. Each knife and fork had been marked with an accession number when first acquired by Winterthur, but these numbers were in highly visible spots on the ivory and had led to staining. Jessica delicately used the tip of a fine scalpel to remove most of the paint, then applied solvent gels to remove the deep stains, before re-applying new numbers to the metal using a more conservation-conscious material.



With the treatment now complete, the ivory-handled knives and forks will become excellent examples in the study collection, being used to demonstrate how a careful conservation approach can help mitigate the damage caused by time on fragile materials like ivory. Jessica is pleased that her treatment will someday mean that these objects will again be displayed in the Winterthur Museum.



ARTC Spotlight—June 2016

The University of Delaware's Art Conservation Department educates and trains professional conservators who are well versed in the treatment, analysis, documentation, and preventive conservation of individual artifacts and entire collections. For more news about our students and other department activities visit our web site at www.artcons.udel.edu.

Top: An X-radiograph of the cutlery reveals hollow handles with internal tang and counterweights. Above: Treatment of the ivory handles—Winterthur/University of Delaware Program in Art Conservation Fellow Jessica Chasen applying cyclododecane to the cracks in the ivory with a kistka, and a solvent gel being used to reduce the paint stains on the ivory. Left: Two of the forks, versos before and after treatment and re-numbering. (Photos: Jessica Chasen and Julia Commander.)