Art Conservation *and the environment*

Tucked into two alcoves that comprise the China Trade Room on Winterthur's third floor, 11 pieces of Asian lacquered furniture are viewed almost daily by small groups of visitors taking special museum tours. Asian lacquered furniture, long prized for its glossy, lustrous surfaces, became popular in Europe in the mid-18th century and has been sought by collectors ever since. Although thoughtfully cared for by Winterthur, the objects in the China Trade Room are considered to be at risk.

Like all such pieces, the lacquer that makes them so attractive is also extremely sensitive to fluctuations in relative humidity and temperature, as well as exposure to visible and ultraviolet light. The damage that may result, deep cracks, shrinkage and a dull, faded or translucent surface, is irreversible. This concern recently resulted in an environmental study of the China Trade Room, undertaken by second-year Winterthur/University of Delaware Program in Arts Conservation (WUDPAC) Fellow Courtney Von Stein. Her study included both an environmental analysis of the room and recommendations for improvement and was incorporated into a grant application intended to help Winterthur fund a two-year position for a lacquer conservator. The study also allowed Courtney, an objects major, to fulfill a requirement for a minor in preventive conservation.

Courtney found that the two most critical environmental concerns were high light levels and rapidly fluctuating relative humidity in the spring and fall. To reduce the visible light levels, Courtney's recommendations included applying additional Plexiglas glazing to a large set of French doors and surrounding windows on the exterior wall in the east alcove. She also recommended glazing the currently-unglazed glass in the eight-sided cupola over the west alcove. She calculated that if the visible light could be filtered to 14 percent, the expected lifetime of lacquered objects in the room would nearly quadruple.

The rapid fluctuations in relative humidity in the room are caused, in part, by the stable temperature in the room (70 degrees). While stable temperature is otherwise a positive condition, it causes the relative humidity in the air to fluctuate. Courtney noted that if the inside temperature could float up or down by a few degrees as the outside temperature rises and falls in the spring and fall, it would help reduce the wide swings in relative humidity that now occur. Winterthur is currently carrying out significant upgrades to its existing heating and air conditioning system, which may allow more flexibility in the temperature set point. Winterthur submitted the grant containing Courtney's environmental study to the Institute for Museum and Library Services earlier this year.

ARTC Spotlight—July 2013

The University of Delaware's Art Conservation Department educates and trains professional conservators in the treatment, analysis, documentation, and preventive conservation of individual artifacts and entire collections. Our students are powerful public spokespersons for cultural heritage and its preservation. For more news about our students and other department activities, visit our web site at http://www.artcons.udel.edu

Top: Detail of the lid of a shawl box. The lacquered surface depicts a garden scene. Above: WUDPAC Fellow Courtney Von Stein examines a lacquered desk in Winterthur's collection. Left: A folded fan illustrates fading on lacquer exposed to light; the lacquer on the top guard has been exposed to light for an extended period of time compared to the lacquer on the bottom half of the lower guard, which has been protected from light. Far left: The surface of a lacquered tray has lost its translucency due to light damage; the parallel cracking on the bottom right is perpendicular to the wood grain and may be linked to a manufacturing process. (Photos: Jim Schneck, Stephanie Auffret)