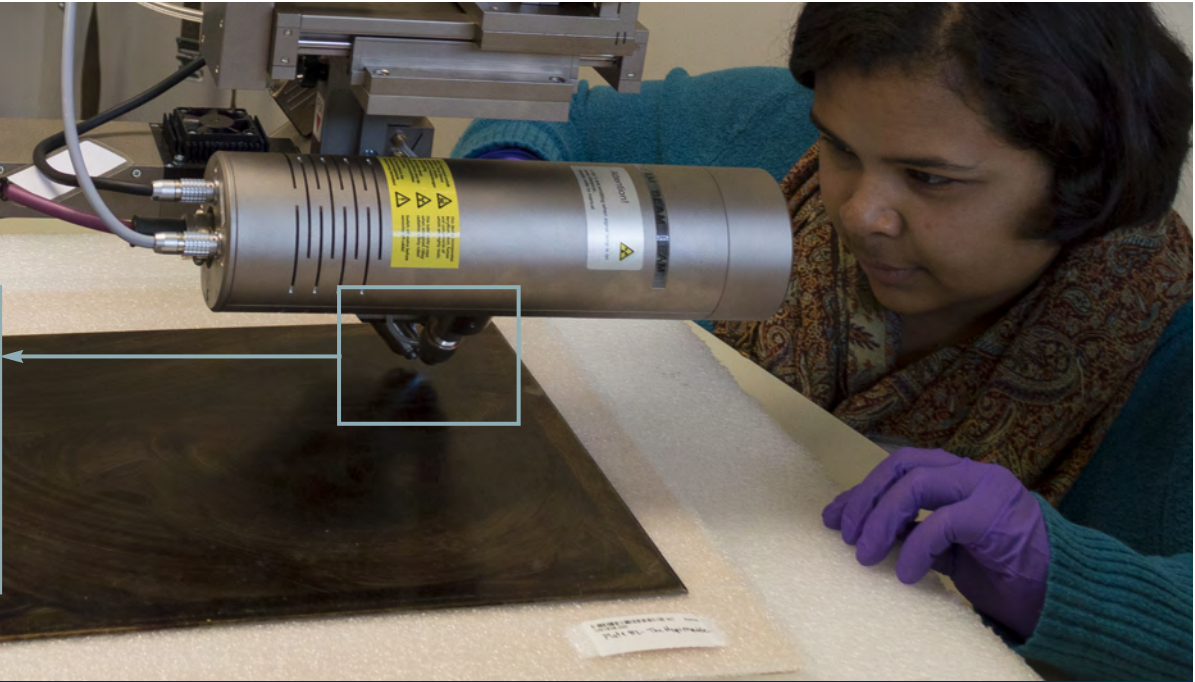


**ARTC Spotlight—November 2013**

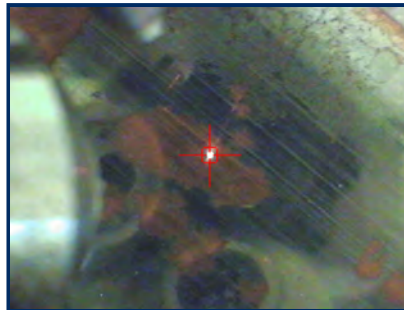
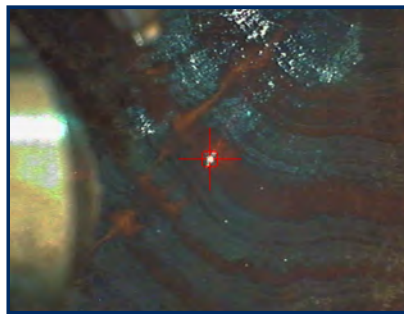
*The University of Delaware's Art Conservation Department educates and trains professional conservators in the treatment, analysis, documentation, and preventive conservation of individual artifacts and entire collections. Our students are powerful public spokespersons for cultural heritage and its preservation. Visit [www.artcons.udel.edu](http://www.artcons.udel.edu) for more about our students and department activities.*

*Top: WUDPAC Fellow Ronel Namde positioning a printing plate beneath the Bruker ARTAX XRF Spectrometer for nondestructive elemental analysis. Inset: XRF head focused on a spot to be analyzed on Edward Curtis's The Hopi Maiden. Above: The Hopi Maiden, Plate 412 from The North American Indian Portfolio 12. Right: XRF focus points on corrosion in the photogravure plate Luqaiot-Kittitas, Plate 247 from The North American Indian Portfolio 7. Photos by Ronel Namde, Kimi Taira, Jim Schneck.*



## Art Conservation *and moments in time*

*A new collaboration between the National Museum of the American Indian (NMAI) in Washington, D.C., and the Winterthur/University of Delaware Program in Art Conservation (WUDPAC) is making it possible for second-year WUDPAC Fellow Ronel Namde to conduct the first ever in-depth scientific investigation of selected photogravure plates used in the production of photographer Edward S. Curtis's epic, 20-volume North American Indian project, published between 1907 and 1930.*



Ronel's technical study focuses on ten of the 2,100 steel-faced copper plates used in the project to reproduce Curtis's famous platinum photographs as photogravure illustrations. NMAI has loaned the ten plates from its collection to WUDPAC specifically for the study.

Photogravure was an early mechanical method for mass producing photographs in printed materials. The process involved transferring the photographic image onto a copper plate, which was then used to print the image with ink. Of the ten plates Ronel is studying, half were created for Curtis by John Andrews and Son and half by Suffolk Engraving in the Boston area; the subjects include such well-known images as "The Hopi Maiden," "Captain Charley-Maricopa," and "A Primitive Style of Hair Dressing." Each one is 2-mm thick and approximately 12x18 inches in size; some have been coated, possibly for protection, with a substance that in at least one case is known to be beeswax and in another may be bitumen. All ten plates have experienced some degradation, and Ronel's primary goal is to identify the corrosion products responsible.

Throughout the study, Ronel will work under the guidance of her academic advisors and with Winterthur scientists as she gains hands-on experience with different types of analytical tools. She began her investigation by examining the plates and corrosion products using X-Ray Fluorescence (XRF) Spectroscopy. Over the academic year she will continue her study with visual microscopy and examination under ultraviolet light. She will also investigate the coating with Fourier-Transform Infrared (FTIR) Spectroscopy, Gas Chromatography-Mass Spectrometry (GC-MS) and Raman Spectroscopy. Through these tests, she will identify the plates' vulnerabilities, sensitivity to light, and the best options for long-term protective housing.

At the completion of her study, Ronel will propose a conservation protocol that can help NMAI address its concerns for the long-term preservation of all of the Curtis plates in its collection.