

Preservation Concerns for Edward Weston's Platinum and Palladium Photographs

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The Lane Collection at the Museum of Fine Arts, Boston, features more than two thousand prints by Edward Weston (1886–1958). The collection contains important examples of Weston's early work, including portraits of Margrethe Mather (fig. 1) and Paul Jordan Smith (fig. 2), both from 1918. X-ray fluorescence spectroscopy (XRF) revealed that the portrait of Mather is a palladium print with mercury, while the portrait of Smith is a platinum print with mercury.¹ The photographs display significantly different image tonalities, although both exhibit horizontal bands along the top edge, where the image appears more neutral in hue.

The portrait of Mather is unmounted but shows evidence of a prior mount on the verso, with adhesive residue and associated paper fibers along the top edge. The portrait of Smith is presently attached to its original mount by a bead of adhesive along the top edge. The adhesive beads on the verso of both portraits correlate precisely to the bands of more neutral image tonalities on the recto. The tonal variation was not intended by Weston but is a result of the presence of the adhesive.

The bands of more neutral image tonality were tested with XRF and compared with adjacent areas outside of the bands. XRF spectra of both prints inside the neutral bands showed definitive peaks for calcium and zinc, which decreased in the area outside the band. No significant differences in the image components (platinum, palladium, and mercury) were noted between the inside and outside of the bands. A sample

of adhesive was taken from the unmounted portrait of Mather, tested with Fourier transform infrared reflectography (FTIR), and determined to contain protein.



Figure 1. Edward Weston, *Margrethe Mather*, 1918. Palladium print with mercury, 24.6 × 16.7 cm. Museum of Fine Arts, Boston, The Lane Collection.

Further analysis and testing of mock-ups are required to determine the cause of the neutral-toned bands associated with the adhesives on these prints.² Until further information is uncovered about the effect of adhesives on platinum and palladium photographs, it is recommended that conservators and artists rely on nonadhesive methods for mounting prints whenever possible.³ Furthermore, prints should be stored in a cool, dry environment to minimize any further chemical changes.

Notes

1. All analysis performed by Michele Derrick, Schorr Family Associate Research Scientist at the Museum of Fine Arts, Boston.
2. At present, the author is researching the cause of this tonal variation at the Museum of Fine Arts, Boston.
3. See Jennifer McGlinchey Sexton and Jennifer Jae Gutierrez, "Nonadhesive Mounting Methods for Photographic Prints," in this volume.



Figure 2. Edward Weston, *Paul Jordan Smith*, 1918. Platinum print with mercury, 24.3 × 19.5 cm. Museum of Fine Arts, Boston, The Lane Collection.