We may live in an age dominated by digital imagery, but in New York City this month, 19th-century photography is having a moment. Two gallery shows, a museum exhibit and a conference are shining a spotlight on preindustrial image-making methods such as daguerreotypes, tintypes, calotypes, salted-paper prints and more—experimental processes that were often difficult to manage and unpredictable in their results. But the works on view aren’t all vintage; some are made by contemporary artists looking to capture the methods’ mystery and immediacy.

The earliest processes, dating back to photography’s dawn around the 1840s, are on display in a pair of exhibitions at Hans P. Kraus Jr. Fine Photographs on the Upper East Side. There, one room showcases pioneering work by John Beasley Greene, whose pictures show old Egypt, Algeria and Paris in otherworldly forms.

Displayed in light boxes with illumination from underneath, original negatives on waxed paper transmit spectral images of pyramids and archaeological finds around the time of their discovery. One shows the Great Sphinx of Giza in the midst of excavation. Another shows Cleopatra’s Needle, the ancient Egyptian obelisk that has stood tall in Central Park since 1881, in its previous home in Alexandria.
A related exhibit in the same gallery turns to daguerreotypes, a format for photographic images summoned on the surface of reflective metal plates.

Vintage examples on view alternate between doubled nude pictures to be viewed in stereo for 3-D effects and postmortem portraits the recently deceased. Some of the latter feature subtle coloration added after the fact, such as a portrait of a little girl lying peacefully with a handful of pink flowers.

“They were colored by hand with powder that was applied with a very fine brush,” Mr. Kraus, the gallery owner, said, “and then breathed on with a moist breath that fixes it.”

The daguerreotypes were selected by Adam Fuss, a contemporary artist who works with the anachronistic process in works of his own, including large-scale images of symbolic mattresses populated with people and snakes that measure up to 3 feet in size.

“What drove me to make large daguerreotypes was the desire to do the hardest thing I could imagine,” Mr. Fuss said of a process that involves sensitive chemicals and mercury vapor coming together to create images of detail and depth. “It’s almost like the Rolls-Royce of photographic processes.”

Contemporary daguerreotypes also feature in a group show titled A New and Mysterious Art: Ancient Photographic Methods in Contemporary Art at the Howard Greenberg Gallery. The technique, which involves coaxing images out of a silver-coated sheets of metal polished to a sheen, evokes what Mr. Greenberg described as the format’s status as “a mirror with a memory.”

“When they were introduced, it was a mystery,” he said while peering at a daguerreotype and seeing a reflection of himself along with the image depicted. “Think about looking at that 175 years ago and how magical it must have seemed.”

Other early methods are featured in the show, including salted-paper prints, tintypes and more. Vera Lutter created a roughly 4-by-7-foot black-and-white photograph of Venice, Italy, with a camera obscura, a dark room-sized construction that allows tiny amounts of light in by way of a pinhole. After six hours of exposure, a projection of what was outside—scattered rooftops with a church bell tower rising above—became clear.

 attribution her interest in the archaic form to its legacy of “experimentation and uncertainty.”

“It was not as clean and predictable as photography eventually became,” she said. “Digital photography foregoes all accident and mystery.”

At the Metropolitan Museum of Art, 19th-century pictures of Jerusalem feature in Faith and Photography: Auguste Salzmann in the Holy Land. As a biblical archaeologist, Salzmann went in search of religiously significant sites but wound up with a fervor for something else.

“He discovered that photography asks as many questions as it answers,” said Jeff Rosenheim, a photo curator at the Met who worked on the show. “He had faith that the camera could be objective, but ended up with faith in photography as an interesting medium.”

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Historic image-making methods will be in force this week at the 19th Century Photography Conference and Show, a series of displays and discussion events gathering top scholars, collectors and dealers at the Wyndham New Yorker Hotel in Midtown.