BY PETER TRIPPI

CONSERVING OUR TEXTILE HERITAGE

Conservators immersing a tapestry in the wet lab

"Textiles are a cornerstone of material culture for all societies," says Janina Poskrobko, Ph.D., conservator in charge of the Department of Textile Conservation at New York City's Metropolitan Museum of Art. Just to be clear, "textile" applies to a wide variety of woven, knotted, and compressed materials made from fibrous and synthetic substances. They include tapestries, carpets, embroideries, velvets, laces, hand- and machine-printed fabrics, costumes, three-dimensional accessories, and much more.

Poskrobko continues, "Our department has developed innovative methods for conserving, storing, and exhibiting textiles from a wide range of cultures, from early archeological finds to contemporary production. The object-based research integral to conservation work provides important primary-source information critical to the correct placement of a textile in its historical context."

It has been a remarkable journey to reach this point. Exactly 50 years ago, in 1973, the Department of Textile Conservation was established in response to the needs of the Met's core collection of approximately 36,000 textile objects, which are held by different curatorial departments. Just listing the units with which the department works closely reminds us how the Met reflects so much of the world's cultural heritage: Ancient Near Eastern; Egyptian; Greek & Roman; Islamic; Asian; Medieval; European Sculpture & Decorative Arts; American Wing; and Modern & Contemporary.

In 1973, Nobuko Kajitani was appointed the department's first head; her object-centered approach — still in use today — emphasized close examination of materials and techniques and the importance of an integrated historical and scientific approach in understanding and preserving the cultural legacies of textiles. At that time, the Met's textiles were kept either in the Textile Study Room or

(TOP RIGHT) Conservators working on a 17th-century British tapestry, *The Destruction of the Children of Niobe* (MMA 36.149.1) ■ (MIDDLE RIGHT) Installing a large carpet (41.190.257) in Gallery 460 ■ (BOTTOM RIGHT) Part of an important carpet (MMA 17.120.124) seen before conservation (left) and after conservation (right)

in curatorial storerooms scattered throughout the museum. The curators valued them highly as expressions of artistry, yet each department had different — and sometimes less than ideal — ways of storing them, from a conservation perspective.

Things really began to change in the late 1980s when Antonio Ratti (1915–2002), an Italian silk entrepreneur who believed deeply in the significance of textiles as works of art, provided major funding for a state-of-the-art center for textiles from most of the Met's curatorial departments. Kajitani's vision, which was realized in its 1995 opening, featured two components: centralized storage with an adjacent public area for study of specific textiles by appointment, and a workspace for the Department of Textile Conservation.

The latter encompasses — among other areas — an open-plan workspace (24 x 50 feet); a wet-cleaning facility that can be repurposed temporarily for special projects (20 x 30 feet); and facilities for dyeing, analytical testing, chemical use, and microscopy. In the last few years, a separate designated facility for art requiring pest remediation (Integrated Pest Management, or IPM) — which became a major task for conservators, with a large-scale freezer, space for anoxic (oxygen-free) treatments, and pre- and post-treatment rooms — was designed in collaboration with colleagues to help address this need museum-wide.

Groundbreaking as its new physical facilities were, the Ratti Textile Center initiative actually began with an equally crucial achievement: the creation of a database of all of the Met's textile holdings, including the storage needs of each piece, transferred from thousands of paper catalogue cards. Following Nobuko Kajitani's retirement in 2003, Florica Zaharia served as head of the Department of Textile Conservation (hereafter "TC"), which continued to grow and evolve. In 2017, she was succeeded in this role by Janina Poskrobko, who had started working there 17 years earlier.

Poskrobko notes that the unit's effectiveness benefits enormously from the "multicultural profile that has marked the staff of this department since its formation." She says, "Currently TC includes native speakers of nine foreign languages, in addition to English. Several staff members have completed university degrees in both the U.S. and abroad. This wide variety of cultural perspective is an invaluable asset when caring for an encyclopedic collection representing multiple cultures across a span of more than 6,000 years."

Today TC has 13 full-time staff members hailing from Argentina, Colombia, Germany, Italy, Japan, Korea, Poland, Ukraine, and the U.S. Their work is complemented by a postgraduate fellow supported by the Andrew W. Mellon Foundation, by interns, and by volunteers. Over time the department has contributed to the education of many conservators now in professional practice around the world.

This team's globalist view is enhanced regularly through opportunities to observe and speak with visiting artists whose textiles are being acquired or exhibited, and increasingly to consider culturally sensitive situations. (Recently, for example, it was decided to remove deteriorating original ribbons from a Lakota infant's vest, dated c. 1890. Not wanting to separate them completely, based on the cultural importance that had been confirmed by a curator, the conservators created a custom pouch to house the ribbons, attached inside the vest's lining and invisible to visitors.)

When presented with a deteriorating textile required for exhibition, loan, or some other purpose, the TC team develops and executes a customized treatment plan informed by their in-depth examination of the object and a study of comparable items and materials. Particularly essential are visual and written documentation of every step in the process, which usually concludes with stabilization of the item's weakened structure and a general improvement of its visual appearance.

Many textiles arrive on the conservator's worktable showing physical signs of time and wear —stains, discoloration, creases, losses, and dust. Very often it was environmental conditions, including temperature, humidity, and light levels, that contributed to the deterioration. Other objects have suffered from improper repairs in the past: often their old linings and patches

(TOP) A fragment of 16th-century brocaded velvet, 16th century (MMA 2002.494.598) ■ (INSET) A detail of the same fragment seen in a photomicrograph at 20x magnification

offer a record of change in the condition of the materials used and/or the technical skills of those who executed them prior to the emergence of conservation as a professional discipline.

Textile conservators have many tools at their disposal: beyond stitching with non-deleterious threads that can be removed by future generations, they might devise an overlay or underlay that stabilizes loose elements or protects the item from other surfaces; use low-suction vacuuming to remove dust and dirt; humidify or apply light weights to relax creases; or use temperature-controlled tools, sometimes with spatulas and/or solvents, to reactivate old adhesive residues that need to be removed.

In addition to temporary exhibitions, textiles are needed for reinstallations and rotations in each curatorial department's galleries. Scheduling these appropriately in order to avoid crunch periods is essential and must take into account TC's other responsibilities, which include the setting of guidelines for care, handling, display, and storage of textiles throughout the museum; quarantining of all newly de-installed textiles (so they can be checked for pest infestation and documented before being returned to storage); participation in the museum-wide IPM protocol and other collections-monitoring programs; participation in the museum-wide team that develops the disaster response skills necessary for collections recovery following an emergency event; and participation in other emergency activities, such as the museum's closure contingency plan when the pandemic hit.

(ABOVE) A cope made for Antonio Barberini (Grand Prior of Rome) c. 1623–28 with silk and metal threads (MMA 11.101) ■ (LEFT) This cope was displayed on a custom-built mount designed with adjustable curved Plexiglas sides and padded with archival material.

TECHNOLOGY TO THE FORE

Janina Poskrobko notes proudly that TC advocated the value of material science and scientific investigation long before it became standard practice in other institutions' conservation departments. "Increasingly sophisticated technology enables conservators to share physical information via a variety of visual experiences," she explains. "We are at a technological crossroads and benefit enormously from cross-generational collaboration."

Before designing their treatment plans, TC staff utilize different ways of seeing to better understand what they are up against. The department contin-

(ABOVE) Flax viewed at magnification 20x ■ (RIGHT) European hemp viewed at magnification 20x

ues to pioneer advances in technical analysis and diagnostic techniques, steadily building and refining its digital collection-based database. Conservators want to know why, where, when, and how a textile was made, and how it has been changed over time. Looking closely at details — at every knot or stitch — helps not only to identify the original color, thread count, density, and fiber content, but also to convey the makers' complex techniques and intentions. (Of course, this last point is only conjecture.)

Like their forerunners, TC staff make photographs and videos of the textile in question and study it under microscopes, x-ray, and multi-band imaging (infrared, ultraviolet, and visible light) through non-invasive analyses. But now TC is particularly admired for its advanced imaging equipment.

The most excitement has been generated by improvements in photomicrography (10x–600x magnification) with the help of an Extended Depth-of-Focus software program, which captures various heights/planes of the textile and combines them to create a better depth-of-field image to help analyze weave structures. When access to this equipment is limited, even a store-bought lens (attached to an iPhone to increase the magnification) provides acceptable-quality viewing useful for preliminary examination. The staff also uses digital renderings of weave structures created with photo-editing software and AutoCAD (a computer-aided design software beloved by architects).

Techniques of this kind benefit from interdisciplinary collaborations with colleagues elsewhere at the Met (such as its Department of Scientific Research) and around the world. TC is now setting up a technical glossary; its aim is to create a centralized resource drawing from the Met's collection of historic textiles including fiber ID, weave structure analysis, and other factors in a systematic presentation for comparative analysis and cross-cultural study. Ultimately this will be posted on the department's landing page on the Met's website. It will offer culturally specific terminology and classifications, as well as photomicrographs that illustrate these terms.

Surely it is not accidental that, as the field of conservation has matured, curators and other art historians have embraced "technical art history," which encourages consideration of an artwork in both aesthetic and physical terms. TC staff are in constant contact with the Met curators who know so much about where a textile fits into its cultural milieu, and conservators are ever more frequently invited to contribute essays about their findings to exhibition catalogues, or to give gallery talks focused on a conservation issue.

TC staff members also work closely with skilled specialists in other departments: art handlers, technicians, craft shop workers (carpentry, Plexiglas, and metal), and conservation preparators (Department of Object Conservation). Depending on the object, these colleagues create custom mounts, frames, storage boxes, and other support structures — all covered with materials that won't harm the textile. TC staff are especially vigilant when it comes to hanging a textile vertically (on a wall or slant); depending on its condition and size, various methods of display have been developed including stitch mounting, pressure mounting, and other free-hanging methods.

TC is eager to share its knowledge with the public, so the departmental landing page

In the reference room, a range of linen fibers can be studied closely.

(LEFT) Sample swatches of various color tones help conservators find the best match. ■ (BELOW) The Indian artist Sufiyan Khatri was invited to demonstrate his craft in the TC wet lab.

on the Met website features intriguing staff-generated blogs and videos, as well as case studies of treatments. The department has long been active on image-based social media platforms such as Instagram and Pinterest, platforms that provide a way for members of the public to post questions, generating a global exchange of ideas and understanding.

A GROWING COMMUNITY

The passing of knowledge from one generation of conservators to the next — what worked and what didn't work — is paramount because it saves time and avoids disastrous errors. Sometimes a conservator will discover a well-preserved dye on the back of a textile, a clue suggesting how its front might once have looked. Naturally this leads to experiments in which recipes of various shades and tones are tested to see if a match can be found. Decades' worth of previous TC experiments have been documented, and there are cabinets full of notebooks containing dye recipes with swatches of dyed materials (both synthetic and natural dyes). Out in the world, staff members and friends of the department continuously gather samples of animal and plant fibers, woven textiles, weaving tools, and natural dyes — bringing them "home" for future reference.

Relatedly, TC continues to digitize all conservation records and the notes in its object files so that these can be searched more quickly. Retiring and retired staff members are interviewed so that their insights will be available to current practitioners. And if you took 35 mm color slides of your holidays in the mid- to late 20th century, you know that they degrade in appearance over time. TC owns thousands of study slides and has sent batches of them to an outside imaging specialist for color calibration, though this is expensive.

In conservation, knowledge crosses international borders daily. TC staff members often present their research at conferences convened by such organizations as the American Institute for Conservation, Institute of Conservation, International Council of Museums, American Association of Textile Chemists and Colorists, International Association for the Study of Silk Road Textiles, and North America Textile Conservation Conference. (These organizations also publish the research of TC staff in their peer-reviewed journals.)

The Met has many longstanding international professional exchange programs as well as travel grants allowing TC staff to conduct research. Fellowships bring to the Met colleagues from different institutions around the world, and this being New York City, there are talented students visiting constantly, especially from the Fashion Institute of Technology a few miles south.

In the past decade, TC has become ever more public-facing. In 2015–17, its staff co-curated four exhibitions, *The Secret Life of Textiles: Plant Fibers*, *The Secret Life of Textiles: Animal Fibers*, *Scenes from the Life of Saint Martin: Franco Flemish Embroidery from the Met Collection*, and *Examining Opulence: A Set of Renaissance Tapestry Cushions*. In 2018 they presented their first annual colloquium, with additional informal webinars in subsequent years. In 2017, TC formed its own visiting committee, a group of scholars, collectors, and other textile lovers who provide advisory support for the department's development of programs, equipment, and various types of needed assistance. Its members are among the many people who attend the annual Textile Conservation Colloquium, where recent research is presented, and they are also the target audience of TC's informative annual newsletter.

All of this activity costs money, of course, and TC remains grateful to the funders who support its efforts, including individuals, corporations, and foundations. Donors can designate gifts in support of the Department of Textile Conservation or a specific project through the museum's Development Office. In the meantime, do visit TC's many resources, found on the Met's website, to learn what its gifted conservators are accomplishing, and get involved when you can. ●

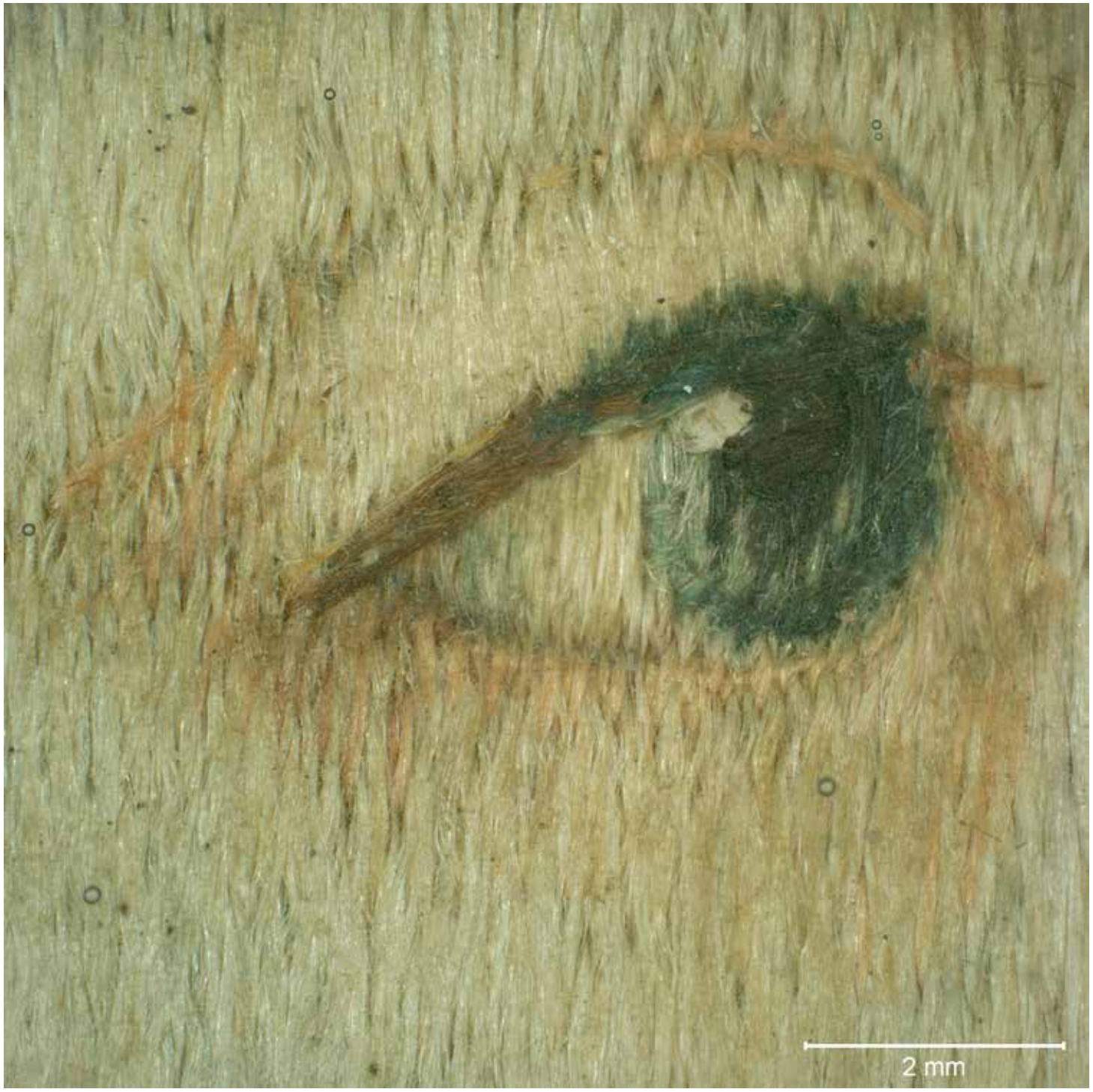
Information: *metmuseum.org. You can also find the Department of Textile Conservation on Instagram, Pinterest, and YouTube.*

PETER TRIPPI is editor-in-chief of *Fine Art Connoisseur* and president of the Foundation for Advancement in Conservation.

(ABOVE) Another view of *The Destruction of the Children of Niobe* tapestry being conserved (see page 114) ■ (RIGHT) The table custom-designed to support the *King Arthur* tapestry (c. 1400) while it was under conservation

A portion of the *King Arthur* tapestry (one of the Nine Heroes Tapestries, MMA 32.130.3a, 47.101.4) before and after conservation

Conservators install a Japanese Noh costume on an ikō rack (lent by John C. Weber, WT.Weber.06)



Part of a 17th-century embroidered portrait of King Charles I (MMA 39.13.7), seen in detail with magnification 20x