

# Jean Zuber et Compagnie's *Le Paysage à Chasses* at Willow Wall: Removal, Treatment, and Reinstallation of an Early Nineteenth-Century Scenic Wallpaper

## ABSTRACT

Willow Wall, a Georgian-style mansion (ca. 1805–1812) in the village of Old Fields, Hardy County, West Virginia, was added to the National Register of Historical Places in 1973. What is reputed to be a first-strike printing of Jean Zuber et Compagnie's scenic wallpaper, *Le Paysage à Chasses*, hangs in the main entrance hall. Designed by Jean Julien Deltil in 1831, this panorama was hand-printed using approximately 1,250 carved woodblocks and 142 different colors of distemper paint.

Over the years, uncontrolled exposure to the extremes of northern West Virginia's climate had resulted in extensive mold and water damage, significant loss of adhesion between the wallpaper and plaster walls, insect predation, losses, and fragile, friable media. Repairs had been made using modern materials such as rubber cement, white glue, and duct tape. In 2003 Willow Wall's current owners contacted the Etherington Conservation Center to treat the damaged wallpaper.

A brief history of Willow Wall and *Le Paysage à Chasses* provides the background for this project, which encompasses the removal, treatment and reinstallation of the wallpaper.

## INTRODUCTION

Willow Wall is a two-story Georgian-style brick mansion that was built by Daniel McNeill between 1805 and 1812 in what has since become the eastern panhandle of West Virginia (fig. 1). What is reputed to be one of only two first-strike printings of the French scenic wallpaper *Le Paysage à Chasses* still in existence in the United States was hung in the grand entrance hall some time after 1831.<sup>1</sup> The other example is found at Lindenwald, President

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Martin van Buren's home in Kinderhook, New York (Hamm and Hamm 1981; Hamm 1988). Although Willow Wall remained in the McNeill family until 1971, a great deal of water damage occurred when the house stood vacant for several years in the 1940s. In 1973, Willow Wall was added to the National Register of Historic Places. In 2000 the house was purchased by Robert and Kathleen Taylor, who had the intention of renovating it and turning it into a bed and breakfast. With generous financial assistance from the State of West Virginia, the Taylors contacted the Etherington Conservation Center in Greensboro, North Carolina, in the fall of 2003. Treatment took place during a four-month period in the spring of 2004. This article looks at the history, removal, treatment, and reinstallation of this scenic wallpaper.

## HISTORY OF WILLOW WALL

Willow Wall is, perhaps, the most splendid home in the South Branch Valley of West Virginia. Its Georgian-Tidewater style is an unusual 200 miles inland. The house is an outstanding example of the elegant use of the



Fig. 1. Willow Wall, Old Fields, West Virginia

Palladian window. As the home of the McNeil family, it has been a cultural and social center for the upper South Branch Valley.

Illustrious persons were guests of the McNeill's, particularly those attracted by the home's most outstanding feature, beautifully preserved early French wallpaper in the "Passing of the Chase" design (Snider 1972, 3-4).

This quotation from the National Register of Historic Places nomination form offers an apt description of Willow Wall. Located in Hardy County, in the eastern panhandle of West Virginia, Willow Wall is a grand structure that dominates the horizon as one approaches it on Route 220. The South Branch Valley is an "incredible rich agricultural area" where planters grew wealthy raising corn and cattle and built some of West Virginia's "most impressive antebellum manors" (Chambers 2004, 496). Willow Wall was built between 1805 and 1811-1812 (Hughes 2004; Snider 1972, 2) in an area known as Old Fields, north of the town of Moorefield. It was built for Daniel McNeill, a wealthy planter and one of Virginia's most important cattlemen. McNeill built his "gargantuan" mansion on the site of an earlier log house, known as McNeill's Fort (Chambers 2004, 498). Daniel McNeill was an early settler of the area, having been a trustee of the newly established town of Moorefield in 1777 (Kercheval 1925, 179).

In April of 1862, the Confederate Congress authorized the creation of rangers, or groups of sympathizers who used guerilla-type warfare tactics to attack and hinder the Union forces (Smith 2000, 93). From 1862 onward, Willow Wall was a center of activity for McNeill's Rangers, a group that was led by Captain John Hanson McNeill, grandson of Daniel. Captain McNeill was regarded by General Phil Sheridan as "the most dangerous of all the bushwhackers" (Ambler and Summers 1958, 228), and he achieved an iconic status in the Valley for his efforts in support of the Confederate cause (Smith 2000, 104). The Battle of Moorefield was fought on lands surrounding Willow Wall on August 7, 1864 (Smith 2000, 157-161), and one contemporary account mentions that both Confederate and Union doctors operated on the back porch, creating "piles of amputated limbs" in the yard (Snider 1972, 2).

Willow Wall is U-shaped in floor plan with thirty-eight rooms including cellars and attics, and its brick walls are twenty-four inches thick.<sup>2</sup> There are sixteen fireplaces and twelve hand-carved mantels throughout the house (Hughes 2004). Willow Wall was designed in the neoclassical Georgian style with a symmet-

rical façade, and it consists of a monumental, central block with smaller attached dependencies extending out from its back, creating an open courtyard. Its brick walls are laid in Flemish bond and trimmed in hand-carved wood work.

The façade of the central block is laid out with five bays and features a pedimented, two-tiered wooden portico supported by columns and pilasters. The portico's rounded arch set above the double columns echoes the style of Palladio. The main entrance door and the door of the upper tier of the portico have elaborately carved surrounds and fanlights. The Palladian motif is then carried onto the forward facing gable ends of the dependencies. Both stories of the dependencies feature a Palladian window set into pedimented, temple-front woodwork surround. The windows are double-hung sashes with six-over-six lights. The wooden shutters have been removed and are currently in storage awaiting restoration.

The double-pile floor plan of the main block is laid out symmetrically with a central hall flanked by two rooms on either side (fig. 2). The central hall is approximately twelve feet wide by forty-five feet long; each of the four rooms or parlors is approximately twenty feet square, and the ceilings are fourteen feet tall.

Even today, Willow Wall's architectural sophistication and French scenic wallpaper seem out of place in the South Branch Valley of West Virginia. It is a monument to the prosperity of the region at the beginning of the nineteenth century as the settlers of the western frontier imported the architectural and domestic fashions of the established coastal cities.

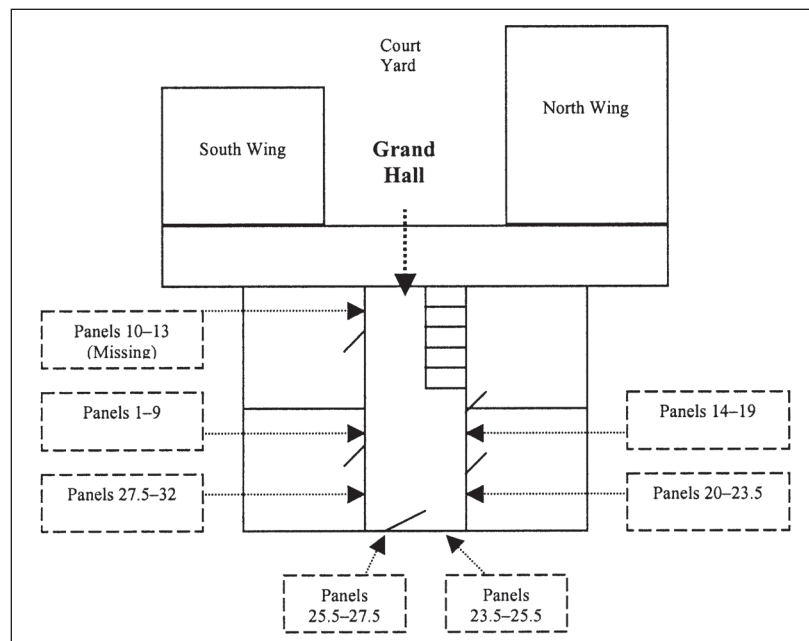


Fig. 2. Diagram of the grand entrance hall at Willow Wall

## DEVELOPMENT OF FRENCH SCENIC WALLPAPERS

Reduced to its most basic components, wallpaper is made up of coloring materials applied to a paper substrate that can be hung on a wall for decorative purposes. The paper fibers used in the primary support and the methods by which the paper substrate is manufactured have changed over time as the technology of papermaking developed. Similarly, the inks, paints, pigments, dyes, and other colorants used to create wallpaper designs have varied. Other changes have been seen in the methods by which patterns are applied, the presence or absence of a ground between primary support and coloring materials, and the means by which wallpapers are hung.

At the end of the seventeenth century, English paper stainers began to join individual sheets of handmade laid paper into longer pieces prior to the application of coloring materials. This technique led to the development of papers that were specifically intended for use as wallpapers (Wells-Cole 1994, 22). Because it was understood that the primary support would be completely hidden between the wall at the verso and the design on the recto, it was not necessary to use the highest quality white rags in the manufacture of hanging papers. Unbleached and colored rags resulted in less attractive grayish-brown papers that nonetheless possessed good mechanical properties (Lynn 1980, 30–32). The application of a distemper ground made of white chalk and animal glue became common at this time (Wells-Cole 1994, 24). This layer masked the color of the hanging paper while also obscuring the appearance of overlapping seams (Lynn 1980, 41–43; Oman 1982, 16). Colored pigments could be mixed with the initial ground layer, or they could be added to a subsequent distemper layer that could then be applied to great effect on top of the white underground. Although design elements were still being added by hand, carved woodblocks were used more and more frequently to add colored inks and distemper paints as the eighteenth century progressed (Lynn 1980, 41–450). Accounts vary as to whether the paper was pressed onto the block (Wisse 1994), or the block onto the paper (Lynn 1980, 47; Ackerman 1923, 27), but in either case a separate block would have been used for each color.

The invention of machines capable of producing continuous rolls of paper in the early nineteenth century catalyzed the industrialization of wallpaper manufacture. The Fourdrinier machine, patented by Nicholas-Louis Robert in 1799 and further refined by John Gamble, Bryan Donkin, and Henry and Sealy Fourdrinier over the next several years, made paper on a moving belt of wire screen. In 1809, John Dickinson patented a machine that made paper on a large rotating cylinder covered with a woven wire screen (Hunter 1947, 342–351). Although some of Jean Zuber et Compagnie's wallpapers were made using

the new machines as early as 1820, handmade papers were generally heavier and stronger than machine-made papers, and many wallpaper manufacturers continued to prefer them. The years between 1820 and 1840 saw a gradual transition between the old and new technologies that was driven at least in part by innovations in color printing. Another consequence of the mechanization of papermaking and color printing was an increased degree of standardization in wallpaper sizes. By 1856 most English-made wallpapers were twelve yards long by twenty-one inches wide, and most French wallpapers had settled at nine yards long by eighteen inches wide. By 1869 most American wallpapers were a standard eight yards long by eighteen inches wide (Lynn 1980, 301–303).

Along with the increasing size and efficiency of papermaking machines came a heightened awareness of the inadequacy of the existing rag supply to meet the constantly growing demand for paper. As Anne Clapp observed, "it should be noted that wallpaper became popular at the very moment when the amount of rags available to the papermaker could not meet his requirements" (Clapp 1981). In the first half of the nineteenth century, papermakers extended their pulps by adding straw, wool, cotton, and hemp fibers. By the 1880s, the addition of wood fibers was already having a decidedly deleterious effect on the quality of paper in general, and of hanging papers in specific. Late nineteenth- and early twentieth-century wallpapers tend to be extremely acidic, brittle, and discolored as a result (Lynn 1980, 302–303).

## LE PAYSAGE À CHASSES

In addition to being sumptuous examples of the block-printer's art, the scenic wallpapers produced by French manufacturers such as Jean Zuber and Joseph Dufour in the years between about 1800 and 1865 also embodied the transitions that occurred in papermaking during those years (Lynn 1980, 180–187; Nouvel-Kammerer 1994, 113). In the early papers, joined sheets of handmade paper were combined to form panels; after 1830, machine-made papers were often used (Lynn 1980, 181). Designed by Jean Julien Deltil for Zuber et Cie in 1831, *Le Paysage à Chasses* was intended to cover walls from chair rail to ceiling with the horizon at eye level and to create a unified, nonrepeating panoramic vista within the confines of a single room. The sky in the upper portion was made using a blue distemper ground that was, after 1819, often brushed in using a technique called *irisé* that allowed for a subtle, gradual transition between a deeper sky blue in the upper margin and a paler blue at the horizon line (Jacqué 1994, 61; Nouvel-Kammerer 1994, 96). The sky could be purchased with or without clouds, and the upper portion could be trimmed to allow the wallpaper panel to fit the room without impacting the design (Lynn 1980, 181). The



landscape in the lower portion was block-printed in the traditional manner using distemper paints (Nouvel-Kammerer 1994, 98). For a thirty-two-panel scenic such as *Le Paysage à Chasses*, a total of 142 colors had to be applied in a sequential “marching order” using 1,253 hand-carved woodblocks (Wanhat Konstit 2003). Each color had to be allowed to dry before the next layer of paint could be added (Lynn 1980, 182). In order to maintain the illusion of visual continuity, individual panels were designed to overlap neighboring panels along the vertical edges, and the last panel merges into the first.

Interestingly, Zuber et Cie is still in business today. Distemper paint is still mixed by hand using traditional recipes, and it is still applied to woodblocks by means of wet felt pads. Blocks are printed by hand using a beam lever to ensure even distribution of pressure. The same woodblocks have been in use for around two hundred years, stored in a humid cave to protect them from environmental fluctuations. In 1995 the tens of thousands of hand-carved woodblocks that make up the various Zuber et Cie panoramas were declared “nationally valuable historical monuments” by the French government (Wanhat Konstit 2003).

Although the National Register of Historic Places Inventory nomination form states that *Le Paysage à Chasses* was hung at Willow Wall shortly after construction was completed in 1811 or 1812, this could not have been the case because the panorama was designed and sold for the first time in 1831 (Snider 1972, 2). It is not known precisely when this example of the wallpaper was made, or when it was hung. The fact that each panel was block-printed on a continuous length of machine-made paper rather than on joined sheets of handmade paper is consistent with a date after 1831. Examination of paper fibers under magnification using microchemical tests such as phloroglucinol and Graff C stain revealed that the Willow Wall paper was formed from unbleached and colored non-ligneous rag fibers with no added woodpulp fibers. Conservators Patricia and James Hamm found that the Zuber wallpaper that was purchased by President van Buren in 1839 and hung at Lindenwald in 1841 was also printed on continuous rolls of machine-made paper. Where the Lindenwald paper was thinner in the center and thicker at the edges, however, the Willow Wall paper was fairly uniform in thickness throughout (Hamm 2007). As it turns out, an article in *The Moorefield Examiner* is the only published source the researchers have been able to find that claims first-strike status for either the Lindenwald or the Willow Wall edition of *Le Paysage à Chasses* (Hughes 2004). While the Lindenwald paper may or may not be a first-strike printing, the fact that the Willow Wall paper is printed on more uniform machine-made paper suggests that it was printed at a later date. The identification of the paper fibers is consistent with a date between 1831 and,

conservatively, 1880. Clearly, the question of when this extraordinary wallpaper was printed and hung at Willow Wall would benefit from additional research.

#### CONDITION

Once attached to a wall, wallpaper becomes the most fragile part of a permanent structure; it is a sort of sacrificial skin that is generally intended to bear the brunt of the wear and tear inflicted by daily life. In a very real sense, most wallpaper is designed to be a temporary feature. When worn, dirty, or no longer fashionable, wallpaper is usually either removed, and often destroyed in the process, or covered over with a fresh coat of paint or a new layer of wallpaper. Because *Le Paysage à Chasses* was a precious luxury item imported from Europe at great expense, it was undoubtedly treated more carefully than less exalted wallpaper would have been. Considering the conditions to which it was exposed, it has survived the passage of time fairly well. The most significant threat to the wallpaper’s preservation was the destructive nature of fluctuating mid-Atlantic temperatures and relative humidity. Paper fibers, the animal glue binder in the distemper paints, and the starch-based adhesive used to adhere the panels to the walls all experienced alternating cycles of expansion and contraction that were ultimately responsible for the majority of the damage incurred. Large areas of starch paste failed, causing panels to delaminate from the plaster walls in irregular patterns. Tears and losses occurred as the wallpaper was increasingly required to support its own weight along areas of partial delamination (fig. 3).

Amateur repair efforts over the years had readhered detached areas using handy but nonarchival materials such as rubber cement, white glue, and duct tape. The rubber cement had turned a distinctive orangey-brown color as it aged, and this contributed to an unattractive murky appear-



Fig. 3. The torn, partially delaminated wallpaper supported by Styrofoam braces.

ance that was visible in places on the recto (figs. 4–5). The full extent to which rubber cement had been used was not apparent prior to removal. In addition, the animal glue binder in some of the distemper paints had failed as well, especially on panels that were water-damaged and adhered to an exterior wall. This resulted in several panels with extremely fragile, friable, and flaking paint surfaces that were disfigured by the loss of image material (fig. 6).

As can be seen in figure 7, the wallpaper was no longer eight feet high in 2004. A great deal of water damage occurred when the house stood vacant for several years in the 1940s. The upper four feet of sky was removed as a result, and a strip of wooden molding was added. Panels 10–13, which occupied a wall directly beneath the landing from which figure 7 was photographed, were also removed at some point and are now lost.

Fluctuations in temperature and relative humidity were not the only problems, of course. During high relative humidity cycles, surface grime adhered to matte distemper surfaces and eventually became embedded. The remaining sky changed from its original cool pale blue color to a warm dirty gray. In addition, high relative humidity undoubtedly fed the oxidation reactions that cause paper in contact with copper-based green pigments to discolor and grow brittle



Fig. 4. Tears, insect predation, embedded grime, discoloration from contact with rubber cement, and duct tape



Fig. 5. Rubber cement residue left on the plaster after the removal of the wallpaper panel visible in figure 4

(Museum of Fine Arts 2007).<sup>3</sup> Insects feasted on cellulose and starch paste, although notably not on the arsenic-containing greens (fig. 8). Mold grew on the water-damaged panels adhered to the exterior wall, and generation after generation of flies left their marks behind. In addition, sections of the wallpaper were removed to accommodate electrical outlets, light switches, and a radiator.

*Le Paysage à Chasses at Willow Wall* was spared one indignity, at least. In 1838, a woman named Harriet Martineau published an account of her journey through the United States in which she mentioned the pervasive-



Fig. 6. This water-damaged panel with flaking paint surface was adhered to an exterior wall to the left of the front door



Fig. 7. The grand entrance hall looking toward the front door



ness of French scenic wallpapers in hotels and public spaces at the time. She wrote:

It seems to be an irresistible temptation to idle visitors, English, Irish, and American, to put speeches into the mouths of the painted personages; and such hangings are usually seen deformed with scribblings. The effect is odd, and in wild places, of seeing American witticisms put into the mouths of Neapolitan fishermen, ancient English ladies of quality, or of tritons and dryads (Lynn 1980, 226).

Mercifully, no such vandalism was perpetrated on the wallpaper at Willow Wall.

## TREATMENT

Before treatment began, a Climatemaster Geothermal climate control system was installed. The system was designed to maintain a temperature between 68 and 72° F, and 55% RH. The importance of returning the wallpaper to a more stable environment was understood by all parties.

Because of the extent to which the wallpaper had already delaminated, the decision was made to remove it from the walls entirely and treat it back in the lab. While the wallpaper was temporarily residing in North Carolina, the Taylors would clean the rubber cement residue and old mold growth from the hallway, repair and seal the plaster, and paint the walls and ceiling of the grand entrance hall.

### 1. REMOVAL

Before removal began, the wallpaper was photographed *in situ*. Panels were numbered with their original Zuber et Cie panel numbers, 1–32. Tears and losses were traced on Mylar polyester film using permanent markers.

Flaking and friable distemper paint surfaces were consolidated wherever necessary using a 6% solution of Aquazol (poly (2-ethyl-2-oxazoline)) in ethanol.

Because of the precarious way in which so many of the wallpaper panels were partially adhered to the walls, it was determined that surface cleaning *in situ* might cause further physical damage and was therefore inadvisable. Because distemper paints are soluble in water, the amount of moisture introduced during treatment had to be strictly controlled. During removal, steam was aimed between the wall and the verso of the wallpaper as much as possible. Those panels that were still adhered primarily with starch paste were persuaded to separate from the plaster using palette knives. Areas that were primarily adhered with rubber cement proved more difficult. The rubber cement was softened with steam to the point where it could be sliced through using a razor blade. The primary support was not skinned during this procedure, although plaster and rubber



Fig. 8. Embedded surface grime and insect predation

cement residues remained on the versos of several panels until they could be removed completely in the conservation lab (fig. 9).

After removal from the walls, wallpaper sections were allowed to dry briefly on large sheets of corrugated cardboard before being wrapped in glassine and Kraft paper. Loose fragments were placed in labeled polyethylene bags and packed with the appropriate panels.

### 2. IN-LAB TREATMENT

Back in the lab, each panel was photographed prior to surface cleaning. The progress of treatment was photodocumented before and after inpainting as well.

#### Surface Cleaning

With the exception of those areas that were too fragile to bear the abrasion, rectos were surface-cleaned using Mars Staedtler white vinyl eraser crumbs. Although the original plan was to remove all of the flyspecks mechanically, this resulted in minute but pronounced media loss that proved to be too disruptive to the paint surface. The majority of the insect accretions could not be removed safely.

Old mold growth was removed from recto and verso using small pieces of expanded latex chemical sponges that



Fig. 9. Bryan Draper uses an improvised razor tool

were immediately discarded after use to prevent dispersion of mold spores during cleaning.

Because the rubber cement on the versos would have continued to discolor, cross-link, and deteriorate if left in place, and because it would have formed a barrier to uniform humidification and prevented firm adhesion between the primary support and the lining paper, the decision was made to remove it. Because of the size of the panels, the probability of driving the discoloration from the rubber cement through to the front of the wallpaper, and the vast quantity of acetone that would have been required for solvent treatment, rubber cement residue was removed mechanically with great care using scalpel blades and various grades of abrasives. Crepe erasers were used to remove the small amount of rubber cement that was still tacky.

### Lining

For a variety of reasons, the decision was made to adhere the treated wallpaper directly to the plaster walls rather than to any additional intermediary support. Because the wallpaper had to return to a wall space that was limited by architectural elements, it was determined that a rigid support such as aluminum honeycomb would have added too much thickness; in addition, this would

have required modification of the walls and moldings that the owners were unwilling to undertake. The use of single-layer rigid supports was also considered, but was rejected as being too complicated to install given the conservation budget. Any element that would permanently alter or damage the plaster walls was deemed undesirable by the owners.

### *Part One: Building the Lining Panels*

The individual wallpaper panels that would hang together on a section of wall were lined onto a larger temporary lining panel made on a one-fourth-inch thick Plexiglas board. Unbleached Irish linen and Japanese paper, RK 29 from Paper Nao, were the new structural support materials. Each Plexiglas board was cleaned to remove grime and to abrade the surface in preparation for lining. Unbleached Irish linen was soaked in water alkalinized with ammonium hydroxide to remove residual sizing and impurities, and then the fabric was rinsed. A very dilute wheat-starch paste was applied to the prepared Plexiglas. The wet linen was stretched onto the Plexiglas, and then the Japanese paper was lined onto the linen using wheat-starch paste. The margins of the linen, approximately one inch all around, were adhered to the Plexiglas using Jade 403 PVA emulsion adhesive, and then the lining panel was allowed to dry completely. A total of four large (4 ft. x 8 ft.) and three small (4 ft. x 5 ft.) lining panels were prepared (fig. 10).

### *Part Two: Lining*

When the lining panels were dry, the next step of the lining process could begin. Because distemper paints are soluble in water, aqueous treatment was not possible. Prior to lining, however, each wallpaper panel was humidified on recto and verso by water applied with a dahlia sprayer to ensure the panel was completely relaxed and flat. A certain amount of acidity and discoloration was removed during this process. As previously discussed, the amount of water introduced into the wallpaper had to be strictly controlled in order to avoid damaging the paint surface. Too much water meant that the distemper paint on the recto could be damaged or lost, but too little water meant

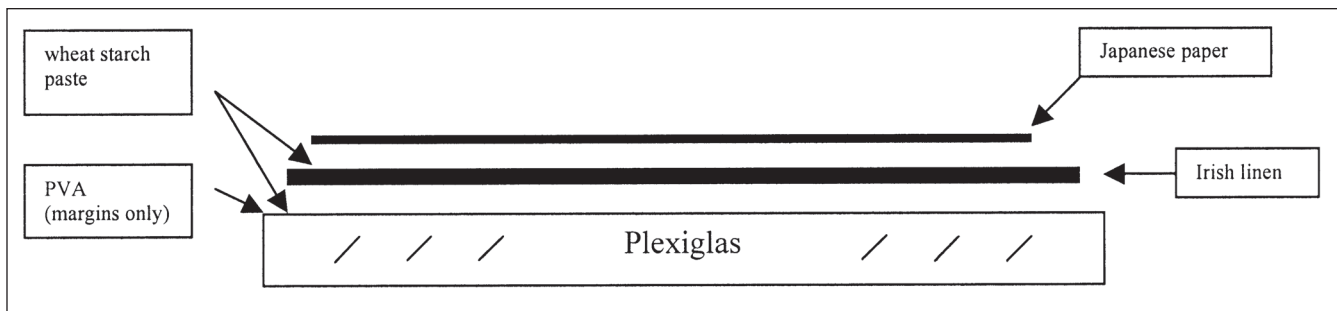


Fig. 10. Diagram of a temporary lining panel





Fig 11. Dianna Clise and Bryan Draper transport the wallpaper to the temporary lining panel

that the wallpaper panel might shift catastrophically mid-transit. A happy balance was required.

The dry lining panel was coated with wheat starch paste. A layer of 4% methyl cellulose was added to provide an increased degree of slip to assist in the manipulation of fragments. The relaxed wallpaper panel was carried to the lining paper on a sheet of Mylar (fig. 11). Each panel had to be positioned carefully, because it was very difficult to re-align once in place. Adjustments had to be made without touching the fragile distemper surface (fig. 12). Adhesion was ensured and excess moisture, adhesive, and air bubbles were removed by brushing the surface through Hollytex. The entire lining process was then repeated with the next wallpaper panel (fig. 13).

### Inpainting

Prior to inpainting, areas that still had friable paint surfaces were consolidated using 0.5% methyl cellulose dissolved in ethanol. Winsor and Newton watercolors and gouache were used to tone the Japanese lining paper in places where the original material had been lost. No additional Western paper fills were added. Abrasions in the original surface were also toned to restore visual continuity (figs. 14–15).

The lined panels were separated from the Plexiglas boards and packaged for transportation back to Willow Wall using corrugated cardboard, glassine, Kraft paper, and bubble wrap.

### 3. REINSTALLATION

While the wallpaper was undergoing treatment, the Taylors took advantage of the opportunity to repair structural elements in the front hallway. Old mold growth and rubber cement residues were removed, and the plaster walls were repaired and cleaned. The overall condition of



Fig. 12. Making minor adjustments

the wall surfaces was very good. The exterior wall to the left and right of the front door was primed.

Methyl cellulose was selected as the reversible adhesive of choice because it is less appealing to insects than wheat-starch paste—which had, in any case, already demonstrated its willingness to fail. In order to ensure uniform adhesion, the walls were sized with two coats of 1% methyl cellulose and left to dry overnight. The next morning, wallpaper panels were adhered to the walls using 4% methyl cellulose. Adhesive was applied to the Irish linen versos using a paint roller (fig. 16). The wallpaper panels were transported to the walls taking care to disturb the damp paint surface as little as possible (fig. 17).

Because the process of lining had caused the panels to expand slightly, the wallpaper had to be modified in order to fit back into the original wall space; fortunately, it was possible to accomplish this with very little impact on the design. Once again, adhesion was ensured and air bubbles

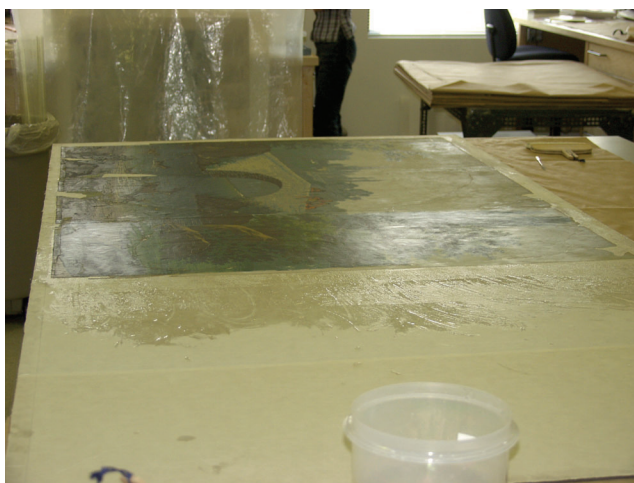


Fig. 13. Lining in process





Fig. 14. Before inpainting



Fig. 15. After inpainting



Fig. 16. Applying methyl cellulose with a paint roller



Fig. 17. Dianna Clise, Bryan Draper, and Michael Lee reinstall a section of wallpaper

were removed by brushing the wallpaper surface through Hollytex. When dry, final in-painting could be completed (figs. 18–21).

## CONCLUSION

Quite a few of the panoramic wallpapers produced in France during the first seventy years of the nineteenth century ended up on North American walls. Their popularity waned eventually as less expensive “sanitary” papers began to be mass-produced in England. By 1880, the author of

“What Shall We Do With Our Walls?” could write, without fear of contradiction, “. . . one can hardly estimate the courage it would take to own that one liked an old-fashioned landscape paper in a hallway or in a dining room” (Lynn 1980, 227).

The assumption of impermanence and the use of poor-quality materials throughout much of the nineteenth and twentieth centuries conspired to ensure that little wallpaper survives the passage of time. Those examples of historic wallpaper that do survive are generally either orphan fragments found behind radiators, light switch





Fig. 18. Final inpainting



Fig. 19. Before treatment



Fig. 20. After reinstatement



Fig. 21. Overview, after treatment



cover plates, wooden trim, and other hard-to-reach spots, or complete rooms that have been preserved because they occupy historically significant structures. Thus, the focus of conservation treatment can vary from the creation of housing for fragments in study collections to large-scale removal, treatment, and reinstallation projects. Everything from *in-situ* surface cleaning and tear repair to the installation of environmental controls fall in between. This project exemplifies how private individuals who hold important historic structures can collaborate with state funding agencies and conservators to preserve cultural heritage. A few more years of benign neglect may well have seen this edition of *Le Paysage à Chasses* damaged beyond repair; as it is, a reprieve has been granted.

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#### MATERIALS

Aquazol (poly (2-ethyl-2-oxazoline))  
 4 large (4 ft. x 8 ft.) and 3 small (4 ft. x 5 ft.) 1/4 in. thick  
 Plexiglas boards  
 Unbleached Irish linen  
 Japanese paper, RK29 from Paper Nao  
 Wheat-starch paste  
 4% methyl cellulose  
 Jade 403 polyvinyl acetate (PVA) emulsion  
 Winsor and Newton watercolors and gouache

#### NOTES

1. *Le Paysage à Chasses* is usually translated in English as "The Great Hunt," but "The Landscape of Hunts" is more accurate (Cyr 2007).

2. Detailed drawings of Willow Wall are available online through the Library of Congress American Memory Web site.

3. Microchemical testing confirmed the presence of copper and arsenic in wallpaper fragments with green pigment, which

suggests that Schweinfurt green (copper II acetoarsenite, chemical formula  $\text{Cu}(\text{C}_2\text{H}_3\text{O}_2)_2 \cdot 3\text{Cu}(\text{AsO}_2)_2$ ) is present.

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