

# NOTES ON THE RESTORATION OF JEAN-BAPTISTE OUDRY'S RHINOCEROS AND LION

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RESTORATION PROJECTS FOLLOW PATHWAYS—AT TIMES simple and straightforward, at other times complicated and convoluted—which more often than not lead to new understandings of and new perspectives on the works of art that inspired and guided the projects. The study and treatment of two of the paintings from Jean-Baptiste Oudry's menagerie series in Schwerin, the *Rhinoceros* and the *Lion*, followed a particularly circuitous route. In the case of the *Rhinoceros*, the animal herself, affectionately known as Clara, was quite a celebrity in her day, as were her many contemporary portraits—but she, like the largest of her portraits, had retreated into obscurity over the centuries. However, her largest and perhaps most famous likeness emerged from that obscurity coincidentally—and fortuitously—about the same time as a new history of Clara's life appeared in the literature,<sup>1</sup> reflecting a renewed interest not only in the animal herself but in Oudry's portrait of her and coinciding as well with some new studies of this famous series of pictures from Schwerin.

In March of 2001, a few representatives from the J. Paul Getty Trust<sup>2</sup> were invited by a Berlin-based organization, the Kulturstiftung der Länder,<sup>3</sup> to visit several former East German museums to explore the possibility of partnering with an institution on a paintings conservation project. These visits, which spanned the course of several days, included a trip to Schwerin, a small town, surrounded by lakes, in the northern part of the country, which during the eighteenth century had been the seat of the Mecklenberg court and today is the capital of the state of Mecklenberg (see Colin Bailey's essay in this catalogue).

The focus of the visit were the works of art in the Staatliches Museum Schwerin, whose collections are displayed in the exceptionally beautiful galleries of the museum building (which opened in 1882), as well as in an eighteenth-century *schloss* known as Ludwigslust, the castle where many of the collections assembled by the duke of Mecklenberg-Schwerin were originally installed.

A number of interesting projects were discussed (and several were eventually supported by the Getty Foundation<sup>4</sup>), but none seemed to be the right fit for a paintings restoration project to be undertaken at the Getty Center. However, as the visit came to a close, two paintings were mentioned almost in passing: life-size animal portraits, a *Lion* and a *Rhinoceros*, by Jean-Baptiste Oudry. The pictures were closely related to the suite of eleven other animal portraits in the menagerie series in Schwerin (see Mary Morton's essay in this catalogue), but their poor condition had precluded any interest in them, and they had never been studied properly. The only photographs of the two pictures to have been published were both small—yet tantalizing—black-and-white illustrations in one of the museum's exhibition catalogues,<sup>5</sup> photographs that were presumed to have been taken some time during the first half of the twentieth century.

Not only did the pictures sound quite interesting, they seemed likely to be an appropriate project for a conservation project involving the Getty Museum, where such partnerships have traditionally involved projects that are unlikely to attract offers of support from other venues.<sup>6</sup> There are excellent conservators working in Schwerin (as well as in nearby Hamburg), but the facilities to deal with such large canvasses are not available there, and the amount of time required to work on the paintings would overwhelm the small staff at the museum and prevent them from carrying out all of the other necessary care and treatment of the collection. It was obvious that without Getty involvement the paintings were destined to simply languish in storage.

Over the next few months, the pictures were taken out of storage, unrolled (and, in the case of the *Lion*, also unfolded), and a report on their condition was prepared by the professional staff at Schwerin; this report was sent, along with photographs, to the Getty Museum. Although the project appeared daunting, it also held great promise, so arrangements were made for a return visit to Schwerin in December of 2001.

The two paintings had been laid out on the floor of the restoration studio, where they covered nearly the entire space (fig. 1). The pictures were difficult to read—due not only to the fact that a good vantage point was not available in the small, crowded room but also because of the extremely darkened and discolored varnish layers on their surfaces—but it was clear even at this first viewing that they remained remarkably fresh and lively. They were, miraculously, unlined (meaning that the original linen canvas had not been backed with a secondary fabric support). This is a rare condition for any eighteenth-century canvas painting, and rarer still for pictures of such enormous scale.

The *Lion* was the more damaged of the two paintings, having suffered more paint loss. Before being rolled, it had been folded along the middle seam (the original canvas is made from two large pieces of fabric sewn together vertically down the middle of the composition) and then at some point in the past must have been crushed along one side of the roll, resulting in a series of long horizontal areas of damage spaced evenly across the vertical dimension of the composition. In addition to the extensive flake losses, there were numerous tears throughout the entire canvas (fig. 2).

The *Rhinoceros* had suffered fewer paint losses—a remarkable finding in light of its exceptional size. It is possible that this was because it was considered too unwieldy for even occasional viewing during the past century—and was thus unrolled and handled less frequently than the *Lion*. The large canvas is composed of four pieces of fabric, sewn together with vertical seams. These original seams—which were skillfully executed with great precision, delicacy, and refinement, resulting in extraordinary strength—remain completely intact and have not split or weakened over time. The only major damages occurred at the right edge, where two large sections of canvas were missing on either side of the middle of the composition. These missing sections corresponded approximately to where one would place one's hands when unrolling the canvas—and it seems likely that the damages may have been due to a rough unrolling at some point in the past, when the missing sections were torn away and discarded. The piece of canvas in between these two sections had also become completely separated from the rest of the painting but fortunately had been saved.

There was no doubt that the pictures were suitable candidates for study and treatment at the Getty Museum. The *Lion* came to Los Angeles first, as it was the smaller and therefore the more manageable of the two paintings.



FIGURE 1  
The *Rhinoceros* and the *Lion* on the floor of the restoration studio at the Staatliches Museum in December 2001. Photo: Mark Leonard.

FIGURE 2  
The *Lion* after completion of the structural work but before cleaning and restoration. Photo: Jack Ross.







The plan was to see how work would progress on the *Lion*, and, if it proved successful, to then have the *Rhinoceros* come for treatment.<sup>7</sup>

In light of the difficult treatment histories of many of the paintings in the collections at Schwerin,<sup>8</sup> it was very important to ensure that the unlined and essentially untouched character of the paintings remains preserved. This was the guiding principle throughout the design and execution of the treatments.

The *Lion* was prepared for proper rolling, crating, and shipment by the conservator in Schwerin. Temporary mends were placed on particularly fragile areas, the picture was placed on top of a layer of cotton muslin (which acted as a cushion) then rolled face out (so as not to compact or crush the delicate paint surface) onto a large hollow tube approximately thirty inches in diameter. The rolled painting was suspended within an airtight crate and traveled to Los Angeles, with a courier from Schwerin, in April 2002. It was unrolled onto a large table in the paintings conservation studio, face up, for initial study. After a few weeks of study, contemplation, and photography, it was then rerolled and unrolled face down so that structural treatment could begin.<sup>9</sup>

The painting had numerous tears and flake losses that had developed largely as a result of repeated folding and rolling in the past, and the canvas had become badly distorted. Because of the large scale of the picture, it was possible to carry out a variety of treatment procedures simultaneously across the entire reverse of the painting. The irregularities in the fabric support were repeatedly humidified (either with light sprays of water or with damp blotter paper) and relaxed while drying under minimal weights. In some areas, tabs made from polyester fabric and a heat-activated adhesive<sup>10</sup> were applied in order to temporarily hold the separated canvas in place. Torn threads scattered throughout the reverse were relaxed, realigned, and repaired with an adhesive,<sup>11</sup> and in some cases new linen threads were woven into the damaged areas. Old canvas patches used to reinforce old repairs (which, fortunately, had not transferred as impressions to the front of the canvas, as often happens with old, heavy patches) were removed and replaced with proper mends. In several small areas at the edges, aged canvas inserts were applied in order to fill the areas of lost fabric. After the initial series of mends were completed, additional temporary reinforcement tabs<sup>12</sup> were

applied in selected areas in order to reinforce the unrepaired or partially repaired damages so that the picture could be stretched eventually onto a working strainer. This would allow the picture to be placed upright, so that continued repairs of some areas could be carried out from both the front and the back of the canvas.

As the treatment progressed, it became increasingly clear that the picture could be properly mended and repaired without having to resort to lining. The original canvas remained remarkably flexible and fresh. This may have been due in part to Oudry's recommendation (in his lectures to the academy)<sup>13</sup> that canvasses be prepared without the application of a glue sizing. Glue size is traditionally brushed into a canvas in order to seal the threads and prevent the ground from staining and saturating the canvas. However, sizing has the unfortunate consequence of filling up the fibers with a natural material that becomes brittle over time. In his lectures, Oudry not only recommended that the practice of sizing be eliminated but that the additional step of "thoroughly washing the canvas"<sup>14</sup> be taken in order to remove any sizing that may have been applied by the canvas maker during its fabrication. Oudry may have followed his own advice in this case (and with the *Rhinoceros* as well), leaving the canvas unsized prior to the application of the ground layers in order to avoid brittleness in the future. As a result, the canvas fibers have remained remarkably supple and flexible.

The edges of the painting were reinforced with thin strips of new synthetic fabric that extended into the reverse of the painting for a few inches, a technique known as strip-lining.<sup>15</sup> The painting was then stretched in a temporary working strainer. The working strainer had been constructed of aluminum bars with a wooden tacking strip attached to the outer edge. Once the painting was attached to the temporary strainer, the temporary patches were removed and mending of the torn areas continued with the painting in a vertical position.

After the picture was standing upright, and the complicated structural issues had been addressed, the treatment turned to the issue of cleaning. The darkened surface of the picture appeared to result from the presence of at least two indistinct layers of old varnish. A thin, older layer (lying directly on top of the paint film) must have been applied very early on in the life of the picture, as it appeared to have swollen the paint film. This was seen in some

of the cross-section samples taken for study under the microscope: scattered pigment particles from the original paint film were found to have migrated into the varnish layer, suggesting that the paint film was either still fresh, or was still young enough—perhaps only a few years old—to have been swollen by the solvents used for the varnish. In one sample, under ultraviolet illumination, it was possible to see the strong fluorescence of the varnish penetrating the paint layer. This evidence suggested that the lower layer of varnish was, in fact, the first layer of varnish to have been applied on the painting (although it does not offer conclusive proof that it was applied by the artist and could therefore be considered an “original” coating). A second layer of very discolored varnish, lying on top of this much older first coating, had been applied much later in the life of the picture. Preliminary cleaning tests indicated that it would be possible to substantially thin the existing upper varnish layer without removing it completely, and without breaking through to the older—perhaps even original—layer below. Completion of this step resulted in a breathtaking change in the appearance of the picture.

In the meantime, due to the ongoing success of the treatment of the *Lion*, plans were made to have the *Rhinoceros* come to Los Angeles as well. The portrait of Clara arrived at the Getty Museum in May 2003, and work began on the structural problems, following the same course of treatment as had been developed for the *Lion*.<sup>16</sup>

The painting was prepared for shipment in an identical fashion to the *Lion* and arrived rolled on a very large hollow tube. After uncrating, the *Rhinoceros* was unrolled face up in the paintings conservation studio (figs. 3a and 3b).

After an initial period of inspection and study (and following the same pathway as the treatment of the *Lion*), the picture was rerolled and then unrolled face down so that the structural repair work could take place from the reverse. In order to support the large canvas, extensions were built around the surface of the largest available work table in the studio (which measured only ten by twelve feet, several feet shy of the dimensions of the painting, which exceeds ten feet by fifteen feet). An aluminum bridge was constructed to allow access to the center of the painting during the structural treatments (fig. 4).



FIGURES 3A AND 3B  
The *Rhinoceros* arrives at the paintings conservation studio rolled onto a large drum and is then unrolled onto a prepared work surface.





**FIGURE 4**  
After the *Rhinoceros* was placed face down, a bridge was constructed to allow for treatment of damages in the central area of the canvas.

Fortunately, aside from two large losses at the right edge (noted above), the picture suffered from only a few areas of distorted canvas and a scattering of very minor flake losses. Once again, fabric distortions throughout the canvas were repeatedly humidified, relaxed, and flattened over a period of many weeks. After successfully returning the distorted canvas into plane, repair of the many small tears on the reverse was begun. The original canvas support on the *Rhinoceros* was found to be even more well preserved than that of the *Lion*, and the extent of the canvas damages—both in the number of tears and in the size of the losses—was considerably less than the *Lion* as well, so a somewhat simpler repair procedure was followed. After relaxation and realignment of torn or broken threads, a lightweight patch of Japanese tissue paper was applied to the reverse with a water-based adhesive.<sup>17</sup> After this dried, a second patch was applied, made from a synthetic, nonwoven paper product, known commercially as Nomex,<sup>18</sup> using a heat-seal adhesive.<sup>19</sup> The type of Nomex chosen was originally designed for use as an insulating material in the interior compartments of high-speed electrical generators and had been developed to provide exceptional strength and rigidity, despite its thinness, and to resist the effects of high heat and pressure. It also resists creasing and distortion, which means that it should stay very flat and will help to keep the torn areas in plane in the future, without adding any extra weight to the reverse (as is often the case with heavier canvas patches).

As with the *Lion*, the original canvas remained exceptionally pliable and flexible (in fact, it was even more supple than the *Lion*, perhaps reflecting a more protected storage during the past century). Given the strength and flexibility of the original canvas, there was simply no doubt that the picture could remain in an unlined state.

New pieces of linen fabric were cut and inserted into the missing sections at the right edge, and the large piece of original canvas that had become completely separated was reattached between the two inserts. Because of the complicated and extensive nature of these structural repairs, it was decided to apply a continuous strip of Nomex across the entire right vertical edge of the picture as a means of reinforcing the assembled parts.

After completion of the structural repairs, a strip-lining was applied to the reverse of the four edges, following the same procedure as for the *Lion*,

using a lightweight polyester fabric that had been infused with a heat-seal adhesive.<sup>20</sup> The strip-lining extends only a few inches into the painting on the reverse, with the exception of the right edge, which, once again in order to provide some additional support for the complicated inserts and repairs, required an additional layer of the strip-lining material.

The newly reunified canvas was stretched onto a lightweight aluminum working strainer, which, like the strainer for the *Lion*, allowed for easy mobility and maneuverability of the painting during the rest of the treatment.

The picture was now ready for cleaning (fig. 5). Preliminary studies had suggested—as with the *Lion*—that there were two distinct layers of varnish on the surface. An upper layer of very darkened soft resin appeared to have been applied when the painting was contained within a frame at some point in the past, as thin strips of a lighter color were visible along the entire left edge. This discolored upper layer of varnish proved to be readily soluble in very mild solvents. A lower layer of varnish—which was undoubtedly much older and covered the entire surface—proved to be more intractable. It was found to contain a high degree of drying oil and, as also demonstrated in studies of numerous cross sections, was intimately bound to the paint surface. Removal would have required the use of very strong solvents—and the darker areas of original paint in the picture (notably all of the dark greens in the lower portion of the landscape) were found to be quite soluble in all but the mildest solvents. Fortunately, the older layer of varnish was quite thin, and, although somewhat discolored, it did not have a disfiguring effect. It was decided to remove the upper layer of varnish and to leave the older (again, perhaps even the original) layer intact. This would produce a stunning improvement in the appearance of the picture, despite the conservative nature of the approach.

As the cleaning progressed, it became clearer how the picture was originally created. Oudry prepared the canvas with a double ground—a deep red lower priming, followed by a beige-colored coating—and then the figure of the rhinoceros was painted and brought to a fairly high degree of finish. The sky and landscape were painted in around the animal (perhaps with the help of studio assistants), and then a number of finishing details were applied to the rhinoceros (such as, for example, the thin wisps of hair that are found at

her ears). During painting of the landscape, a few corrections were made to certain details of the rhinoceros, notably to the flap of skin hanging below her neck, which was made somewhat smaller (and can now be seen emerging through the landscape as a pentiment).

Extensive cross section studies revealed a very straightforward and comparatively uncomplex layer structure. The majority of the sky appears to have been underpainted with a deep blue tone, and this was modified across the picture with single layers of lighter or darker paint as needed. Almost all other parts of the composition were painted with only one or two layers of paint, applied in a free, direct, and uncomplicated fashion.

The visual evolution during the cleaning process underscored the fact that Oudry approached his subject as a true portrait. The fresh, cool-toned atmosphere of the landscape was revealed, and the rhinoceros regained a presence that was not only the result of her now more visible weighty forms but also of her engaging—and engaged—direct contact with the viewer. Her eye stares directly out of the picture, inviting (and perhaps demanding) a dialogue.

After completion of the cleaning, the long tasks of filling, varnishing, and retouching began. All of the losses were filled with a white gesso putty to bring them up to the level of the remaining original paint. The picture was photographed at the completion of this stage to record the state of the surface (fig. 6).

The losses were underpainted with a water-based gouache paint in a deep red (burnt sienna) color. This was done to imitate the visual effects of the deep red preparation that Oudry used, ensuring that the retouched surfaces of the losses would appear to have the same vibrancy and depth as the original paint surface. After completion of the underpainting, the picture was given a brush coat of a new synthetic resin varnish.<sup>21</sup> As is often done with large paintings, the varnish was applied by two people in a team effort. The varnish was brushed on in a large section by the first person, and the second person followed along behind and continued to brush out the varnish as the first person moved on to the next section.

Because of the somewhat dry nature of the surface, the varnish tended to soak in quite a bit, and it was decided that a second layer of varnish would





FIGURE 5  
The *Rhinoceros* after completion of the structural work but prior to cleaning and restoration. Note the new canvas inserts at the right edge. Photo: Jack Ross.





FIGURE 6

The *Rhinoceros* after cleaning. In preparation for retouching, areas of missing paint have been filled with a white gesso putty in order to bring the level of the loss up to the surface of the remaining original paint. Photo: Jack Ross.





FIGURE 7  
During varnishing, the surface of the *Rhinoceros* was divided into manageable sections by placing drafting tape along the original seams in the canvas, which allowed the use of thin sheets of plastic to cover all but the area being worked on. Photo: Mark Leonard.



FIGURE 8  
A section of the new house-frame style molding held in place next to the *Lion*, prior to patination of the gilded surface. Photo: Mark Leonard.

have to be applied. This was done in a somewhat different fashion. Drafting tape was placed along one edge of one of the seams and used to affix a thin sheet of plastic film that covered all but one section of canvas (fig. 7).<sup>22</sup> The exposed section of canvas was then brush varnished. Each section was allowed to dry, and the neighboring section was then varnished while the rest of the picture was covered. The end result is that the surfaces of all four sections of the canvas are similar, and the seams provide a natural boundary line that prevents any discrepancies from being visible.

After completion of the varnish applications, retouching began in earnest and was completed after nearly two years of work. The paint used for retouching was a synthetic resin-based variety, specifically developed for use in the field of conservation,<sup>23</sup> which makes use of pigments of exceptional stability and lightfastness (so they will not fade or change in appearance) suspended in a resin that is exceptionally stable but very easily reversible (so



that it can be removed with mild solvents at any point in the future, leaving no trace). Particular care was paid to retouching of losses that were to be at eye level. Losses along the distant top edge were painted in more freely, as they would only be seen from a great distance by all viewers (other than future restorers who may work on the picture—at some point quite far in the future one hopes!).

As the retouching neared completion, it became apparent that the more subtle work on the surface—always reserved for the final stages of treatment—would have to be carried out in a space where the large painting could be viewed not only from a normal viewing distance but with good top light. The paintings conservation studio at the Getty Museum only allows for side light from the windows, which is usually not a problem with smaller pictures, as the light from the windows can be easily altered and controlled through a combination of blinds and window shades, but presents quite a challenge with oversized canvasses. In the studio setting, it is simply not possible to get a good vantage point to see the picture as a whole, free of reflections, and from a proper, uninterrupted distance. The subtle glazing and scumbling that was needed to pull the picture together visually could only be done in a gallery setting with proper overhead lighting (skylights and natural light, in this case), and so the picture was taken into the public galleries for a three-week period (with the public present) and the retouching brought to conclusion (see plate 11).

After completion of the retouching, the picture was moved to a large spray booth (normally used by the preparations department, this is the only booth on site at the Getty Center large enough to accommodate Clara's girth) and again divided into varnishing sections along the original seams. Final layers of varnish were sprayed onto the individual sections of the surface over a period of several days, giving the picture a fully saturated and unified appearance.

The painting was then returned to the conservation studio, removed from its temporary strainer, and restretched onto a traditional wooden stretcher with keys; a similar stretcher was used for the *Lion*. In order to provide some extra support for both paintings, pieces of linen sized with rabbit-skin glue were stretched onto small strainers that fit within each of the openings of the stretcher from the reverse. A heavy layer of sizing on the linen gives it "tooth," a feeling somewhat like rough sandpaper, providing tex-

tured, gentle support for the original canvas. This linen layer will also help to guard against vibration when the painting is moved (both in the gallery and on the journey home to Schwerin).

The pictures were lacking frames, so a new set of moldings was constructed (fig. 8). Fortunately, most of the collections at Schwerin have been exhibited in the past in a house-frame style,<sup>24</sup> so the choice of the style of molding to be used was considerably simplified. The house-frame motif was used, although it was expanded in scale in order to accommodate visually the larger scale of these paintings (the *Rhinoceros*, the *Lion*, and a third picture in the series, not yet treated, a *Tiger*, all received the new moldings). The large frames were each made in four pieces so that they could be easily disassembled for movement, particularly during transit and shipping. The frames were constructed and gilded by a frame maker in London,<sup>25</sup> but the final patination of the gilded surfaces was done at the Getty Museum so that it could be brought to an appropriate level with the paintings close at hand.<sup>26</sup>

During their stay at the Museum, these pictures—as great works of art often do—catalyzed not only some innovative and creative approaches to treatment but also generated enough interest for members of the Paintings and Sculpture and Decorative Arts Departments to develop this exhibition, which reunites the *Rhinoceros* and the *Lion* with their compatriots from Schwerin.

Prior to having the pictures come to Los Angeles, thought was given to how the pictures might return to Schwerin. Their unlined state—and the lengthy care and effort that went into their treatment—precluded the possibility of rerolling them for the return journey. Fortunately, it was determined early on that they could remain stretched and be crated in such a way as to allow them to be transported in a 747 cargo aircraft. In order to minimize the impact of vibrations, paintings are usually transported standing upright rather than lying down. The *Lion* is small enough to be transported this way, and the *Rhinoceros*, once crated, can be placed on a slightly inclined support frame to allow it to be shipped in a nearly vertical position.

When the pictures are returned to Schwerin, they will be installed in newly refurbished galleries in the building that was their original setting in the eighteenth century, the Ludwigslust *schloss*. The *Rhinoceros* may even be reinstalled in what may have been its original venue: the dining room at Ludwigslust.

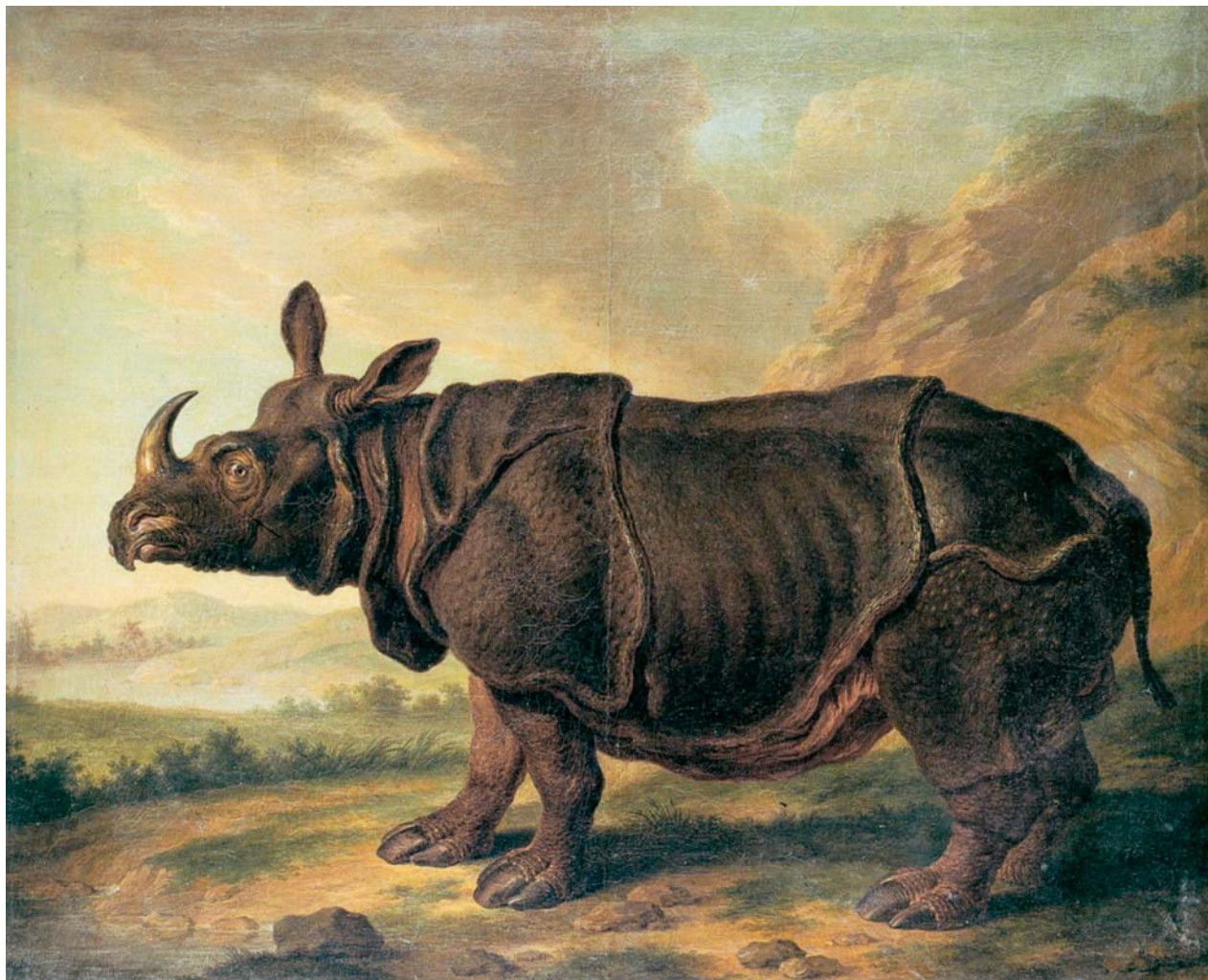


FIGURE 9  
Johann Dietrich Findorff (1722–1772), *Rhinoceros*  
(after Oudry), ca. 1752. Oil on canvas, 112 × 140 cm  
(44 $\frac{1}{8}$  × 55 $\frac{1}{8}$  in.). Schwerin, Staatliches Museum.

A contemporary copy of Oudry's painting, made in 1752 by the Schwerin painter Johann Dietrich Findorff (1722–1772) (fig. 9), is significantly reduced in scale from Oudry's original but appears to replicate the original proportions of the composition. A comparison of the two shows that Oudry's painting retains its original dimensions from left to right, and may have lost only a few centimeters at the bottom, but appears to have lost about sixty centimeters (approximately twenty-four inches) from the composition at the top of the picture. Assuming the Findorff copy is accurate, originally Oudry's composition would have had more sky and landscape at the top, making it similar in balance and composition to most of the other paintings in the series. In the painting's current format, the rhinoceros sits at the very center of the picture, and the regularized space on all four sides of the animal makes the composition somewhat awkward. It is possible that a larger expanse of sky would have resulted in a more pleasing and balanced effect (and, in fact, a small area of blue sky can be found at the far right of the

top edge, in between the two hilltops). This, though, is pure speculation. Some contemporary documents contain measurements that would refute this theory; others seem to support it.<sup>27</sup>

Coincidentally, however, in the dining room at Ludwigslust there is a molding that has nearly the identical dimensions of the *Rhinoceros* from left to right, and if the estimate of the missing section at the top is factored in, the measurements from top to bottom of that molding would have accommodated the presumed original dimensions of the painting perfectly.<sup>28</sup> Further research is needed, but it seems likely that the painting was first exhibited in the dining room. If this is indeed the case, reinstallation there would provide an appropriate conclusion to the intriguing pathway that Oudry's *Rhinoceros* has charted, and a fitting end to her journey, when she is finally reunited with the rest of the menagerie in their original home. ♦



## Notes

1. In 2004, Glynis Ridley, a professor at the University of Louisville, published a detailed study of Clara's life and travels; see Ridley 2004.

2. The group consisted of the author, conservator of paintings at the J. Paul Getty Museum; Scott Schaefer, curator of paintings; and Joan Weinstein, associate director of the Getty Foundation.

3. The Kulturstiftung der Länder is a Berlin-based organization with a broad mission, ranging from restitution of works of art to supporting conservation projects throughout the German states. The author is particularly indebted to Karin van Welck, former general secretary, and Britta Kaiser-Schuster, of the Kulturstiftung for their support of this project.

4. Funding was provided for the research and treatment of four seventeenth-century paintings.

5. See Schwerin 2000, p. 163.

6. Since 1990, over a hundred collaborative conservation projects have been carried out by the Paintings Conservation Department, providing study and restoration of major works of art from other institutions. For further information, including an illustrated listing of all these partnerships, see the Getty Museum website: <http://www.getty.edu/museum/conservation/partnerships/index.html>.

7. Initial treatment of the *Lion* was made possible by a generous grant from the Friends of Heritage Preservation. Continued support of the Oudry project has been provided by the Paintings Conservation Council of the J. Paul Getty Museum.

8. The collections in Schwerin have been subjected to many well-intentioned but unfortunately misguided treatment procedures in the past. The most notable of these appear to have occurred in the late nineteenth and early twentieth centuries, when a popular process of "regeneration" invented by the German chemist Max von Pettenkofer was carried out on a large number of paintings. See Max von Pettenkofer, "On Oil Paint and the Conservation of Painting Galleries Using the Procedure of Regeneration (1902)," in *Issues in the Conservation of Paintings*, ed. David Bomford and Mark Leonard (Getty Conservation Institute, Los Angeles, 2004), pp. 339–57.

9. Treatment of the *Lion* was carried out by Tiarna Doherty, associate conservator of paintings.

10. BEVA 371, a thermoplastic polymer mixture composed of ethyl vinyl acetate and other ingredients, was used as the adhesive.

11. A mixture of Sturgeon glue and wheat-starch paste was used as an adhesive during the repair process.

12. These additional tabs were made with polyester and BEVA 371.

13. See Oudry 1863.

14. Oudry 1863.

15. The strip-lining consisted of plain-weave polyester fabric that had been coated with BEVA 371. The infused polyester was applied to the reverse of the original canvas with a warm tacking iron.

16. Treatment of the *Rhinoceros* was carried out by the author.

17. A mixture of Sturgeon glue and wheat-starch paste was used.

18. Nomex is a registered trademark for a family of meta-aramid fiber products manufactured by Dupont. For further information, see the Dupont website: <http://www.dupont.com/nomex/>.

19. BEVA 371 was once again used as the adhesive.

20. Oudry 1863.

21. Regalrez 1094, a low molecular weight hydrocarbon resin, was dissolved in a slow evaporating, nonaromatic mineral spirits (Shell D38). This varnish, widely used in the field of paintings conservation, was chosen because of its visual appropriateness for the picture, as well as for its stability and longevity; it can be removed at any point in the future without necessitating the use of solvents that would have any effect upon the existing older varnish layer or the original paint.

22. Dartek (a cast nylon film made by Dupont) was used.

23. Gamblin Conservation Colors were used. For further information: <http://www.gamblincolors.com/conservation/>.

24. The Schwerin house-frame style is a nineteenth-century adaptation of an eighteenth-century French Neoclassical style. The frames are made from architrave moldings with a bundled

reed outer-edge ornament covered by ribbon strappings and an inner-edge pearl ornament.

25. The frames were constructed by the firm of Arnold Wiggins and Sons, Ltd.

26. The frames were patinated by D. Gene Karraker, assistant conservator.

27. See Christoph Frank's essay in this catalogue: The mid-eighteenth-century French measurements cited there in note 36 correspond very closely to the current dimensions of the painting, but the German measurements of 1808 cited in note 38 suggest that the picture may have been larger. It should be noted that measurements are often somewhat unreliable, and they may have even been just estimates.

28. The Findorff copy measures  $112 \times 140$  centimeters ( $44\frac{1}{8} \times 55\frac{1}{8}$  in.). In its current format, the Oudry Rhinoceros measures  $306 \times 453$  centimeters ( $120\frac{1}{2} \times 178\frac{1}{8}$  in.). If it is assumed that the width of the Findorff is in proper proportion to the width of the Oudry, a mathematical calculation suggests that approximately 60 centimeters (24 in.) are missing from the top of the composition. This would mean that the original dimensions were approximately  $367 \times 454$  centimeters ( $144\frac{1}{2} \times 178\frac{3}{4}$  in.). The molding in the dining room at Ludwigslust is approximately  $370 \times 455$  centimeters ( $145\frac{3}{4} \times 179$  in.).