

MIGUEL COVARRUBIAS: CONSERVATION OF NINETY-ONE WORKS ON PAPER

by Randall Couch

From the time of his arrival in New York in 1923 until the end of the 1930s, Mexican-born Miguel Covarrubias was one of America's best known caricaturists. His depictions of film stars, pundits and theater people for *Vanity Fair* and *The New Yorker* seem to us today to define the look of an era. They are also powerful portraits, seldom surpassed as distillations of character even by the photographs of Steichen, which appeared in the same pages.

The Harry Ransom Humanities Research Center owns ninety-one original works on paper by Covarrubias, including book illustrations and drawings from his "second career" of anthropology. Many of these works came from the collection of Nickolas Muray, who was a noted portrait photographer, fencing champion and close friend of the artist.

Early in 1984, when the National Portrait Gallery was planning its recent Covarrubias exhibition, our Covarrubias collection had already been assigned a high priority for conservation treatment. The request to borrow twenty pieces for the show prompted us to go ahead with treatment for the whole group.

There was good reason to treat the collection as a group. In addition to various other ills, nearly all the pieces shared a common problem. They had been attached to window mats at all four edges with masking tape. In other respects the group could not have been more diverse. A wide range of papers, secondary supports and

attachments was present. Media included watercolor, gouache, several drawing inks, lithographic crayon, graphite and felt marker inks. Because most of the pieces had been drawn for reproduction, a thicket of editors' and engravers' notations, markups and stamps was present as well.

We were faced, then, with a large number of pictures, varying in structure and condition, which had at least one form of damage in common. My colleagues Cheryl Carrabba, Sue Murphy and I designed the treatment with three questions in mind: Does handling the objects as a group improve the quality of the treatment? Does it improve efficiency? Does it retain the safeguards embodied in the AIC Code of Ethics and Standards of Practice? In the following pages I will highlight the treatment sequence and then present some observations on the answers to those questions.

#### Documentation

We began by applying the idea of "batching" to the before-treatment photography. The camera was set at a distance which would accommodate all but a few of the largest items. Then, using the camera's automatic exposure control, the pieces were photographed, front and back, in numerical sequence. Only the last digit of the control number required changing between items.

Written documentation was approached the same way. Descriptions, condition reports, and treatment proposals were completed for all the pictures before treatment was started. For the first two of these sections we used a modified "free text" format; for the propo-

sal we chose a check-off format. Categories for the check-off section were based on a preliminary survey of the collection. Later the treatment itself was recorded on the back of the form using numbered statements. The finished proposals were discussed with the curator and her approval recorded on each document.

We used a planning board of color-coded dots to record which items were at a given stage of treatment. In addition, the treatment reports were moved through a series of file folders as the pictures progressed through the treatment sequence.

### Treatment Sequence

We carried out each step in the treatment sequence for the entire group before going on to the next step. For example, we performed solubility tests on all the pieces before dry cleaning any of them. There were some exceptions to this rule. Where both water and solvents were to be used, for instance, we began in some cases with water and in others with solvents.

We followed this procedure until we had completed the tape removal on about a third of the pictures. At that point it became clear that, due to staff leave and other commitments, we would not be able to finish treating all ninety-one pieces before the exhibition deadline. So we finished the twenty which were to be borrowed, and then resumed our interrupted treatment sequence.

### Tape Removal Using Solvents

Most of the masking tape had been applied at about the same time; it was still somewhat sticky. Our tests showed that VM&P

Naphtha was effective in swelling and softening the masking tape adhesive; at the same time virtually all the media, including stamp-pad and ballpoint inks, were unaffected. On some of the hard-surfaced papers, treatment with naphtha removed all traces of the adhesive. Many more were left with residual adhesive in the paper texture or with discolored areas in the paper. These received a second treatment with other solvents, such as toluene, ethanol and tetrahydrofuran, if the staining was deemed unacceptable and the media permitted. Aged masking tape, and other adhesives such as rubber cement, were also treated with appropriate solvents.

Solvents were applied by total immersion, by immersion of the edges of the sheet only, and by brushing and/or spraying while the sheet was on the vacuum table. Two conservators worked together to immerse or dip sheets in rapid succession. Naphtha was filtered and re-used once. Up to eight pictures were stacked on screens to dry in the fume hood.

#### Treatment of Discolored Lead White

Several of the gouache paintings displayed the mottled discoloration in highlight areas characteristic of lead white. Lead white, or basic lead carbonate, is a pigment valued for its great covering power but which, in aqueous media, is susceptible to conversion to the blackish lead sulfide by hydrogen sulfide in urban atmospheres.

The discoloration can be reversed by treatment with ethereal hydrogen peroxide, which oxidizes the lead sulfide to the more stable pigment lead sulfate. The treatment solution is prepared by shaking concentrated aqueous hydrogen peroxide in a small bottle

with diethyl ether. The immiscible liquids form distinct layers, and sufficient hydroxide peroxide diffuses into the ether layer to accomplish the purpose. The ethereal hydrogen peroxide, applied with a fine brush, evaporates almost instantly so that only the discolored surface of the paint is exposed to the oxidizer.

Despite our care to dip the brush only into the ether layer and to avoid wiping it on the side of the container, microscopic examination showed some movement of the water-soluble paint in our initial tests. Moisture buildup could be caused by condensation of atmospheric moisture on the cool brush (the solution components must be stored under refrigeration), or by the breakdown of hydrogen peroxide accumulating in the brush. The problem was easily corrected by wiping the brush dry on a tissue after every second or third dip in the solution. This treatment yielded dramatic improvements in the appearance of affected pieces.

#### Consolidation of Flaking Paint

Half a dozen of the gouache paintings showed significant cracking, cupping and flaking of the paint film. In some instances this appeared to be due to flexing of the paper support under brittle areas of paint. In others there was simply poor adhesion between layers of media, especially in those rare instances when Covarrubias altered his initial design by overpainting. More than one application technique was required to stabilize these different conditions.

We felt that aqueous fixatives for this material would be practically irreversible and difficult to apply without disturbing the

sensitive paint. Of the solvent-soluble resins we selected Acryloid B-72 because of its non-yellowing properties and because of reports of its successful use on similar porous paint surfaces.<sup>1</sup> We prepared test patches and a mock-up picture using Winsor and Newton "Designers Gouache". We attempted, with limited success, to duplicate the various types of cracking by baking and by manually flexing the paper. Then we tested several concentrations of B-72 in solvents of varying volatility. We looked for adequate adhesion of the paint to the paper support without alteration of the matte surface.

For large cupped flakes in localized areas, we settled on 2.5% B-72 in mixtures of toluene and xylene fed into the cracks with a fine brush. The pictures were treated on the vacuum table with the vacuum at 25 inches H<sub>2</sub>O to aid penetration of the consolidant. Large areas of small overall flaking were treated using 2.5% B-72 in mixtures of xylene and diethylbenzene. This consolidant was applied with a fine brush and with an airbrush, again on the vacuum table.

#### Observations

Applying our criteria of improved treatment quality, improved efficiency, and maintenance of ethical safeguards, we can make several observations about the effectiveness of this group treatment.

1. Batching of photodocumentation saved a tremendous amount of

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<sup>1</sup>See Elizabeth C. Welsh, "A Consolidation Treatment for Powdery Matte Paint," in *A.I.C. Preprints* (Washington, D.C.: American Institute for Conservation, 1980):141-47; and Bob Futernick, "Conservation of Scenic Wallpapers: *Sauvages de la Mer Pacifique*," *Journal of the American Institute of Conservation* 20 (1981):139-46.

time. Use of automatic exposure control was not effective because it tended to mask differences in density between objects and between before & after shots of the same object.

2. Batching condition reports and proposals saved less time than expected because of the human element of fatigue. It proved difficult to maintain our momentum in the face of ninety-one reports unrelieved by other tasks.

3. The treatment form, employing both check-off boxes and free text areas, required less time to complete than a purely descriptive form while recording all necessary information.

4. The planning board of color-coded dots proved to be useful only when our director came through and asked, "How's the Covarrubias project going?" It did not expedite the treatment. The file folder system, however, we found quite useful. A computerized version of the file folders could have been even more effective. Numbered statements would lend themselves to use of a database management program. Such a program could prompt the conservator by displaying each report as the next treatment step came up. This could be done by comparing steps completed to steps proposed.

5. Teams proved very useful in solvent treatments. By working together, we could often reduce the time a picture spent in the solvent. An extra pair of hands also improved the ability to respond quickly when something unexpected happened.

6. Dividing the labor among three conservators had certain drawbacks. Interpreting someone else's solubility tests, for example, was sometimes very difficult; we spent time trying to develop a

standard vocabulary. Tests were often repeated. Such redundancy may have added an extra margin of safety, but it was not efficient.

7. We found a practical limit to the time savings by batching solvent treatments. For health reasons we felt it unwise to work with toxic solvents straight through until the entire group was completed. Breaking this work into smaller time units increased the amount of time spent in setup, cleanup, etc.

8. The interruptions created by our other responsibilities to the institution cut down on the efficiency of the treatment. We tried to spend too large a portion of each day on this project, and were unable to defend it against unpredictable interruptions. We have now designated a three-hour period every morning for treatment, and have been very successful in keeping it free of intrusions.

9. Group treatments are an increasingly important part of our work at the HRHRC. After the lengthy Covarrubias treatment was completed, however, we all wanted to work on individual treatments which could be taken from start to finish fairly quickly. The feeling of accomplishment is important. We now try to intersperse shorter projects among the longer group treatments.

#### Summary

We felt that the gain in efficiency from treating this collection of art on paper as a group was moderate but significant. The quality of the treatment was roughly equivalent to what it would have been had the pieces been treated singly. We benefitted from the ability to refine our techniques as we worked on several similar



problems. We found that the greatest risk was the dulling of the conservator's attention -- "assembly-line syndrome."

We were pleased to confirm that it is possible to save time by treating works of art on paper in groups without sacrificing the safeguards embodied in the Code of Ethics and Standards of Practice. Three factors seemed most important to us: first, to test each piece adequately; second, not to perform any procedure on more pieces at one time than can be closely monitored by the conservators (this varies with the procedure); and finally to have all space and equipment prepared in advance which might be necessary to deal with unexpected events in the treatment.

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