



Summaries of the Posters at the
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CLEANING, RETOUCHING AND COATINGS



THE CHALLENGE OF CLEANING SPANISH COLONIAL PAINTINGS CONTAINING UNKNOWN MATERIALS

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Colonial painting techniques of the seventeenth and eighteenth centuries are very different to those encountered in Europe and North America. The restoration of these paintings is a constant bundle of surprises, and sometimes a great challenge.

Paintings were executed on one or more pieces of canvas sewn together, either hand-woven locally or reutilized pieces of merchandise bundles from Spain. The ground usually consisted of a mixture of chalk, brown or red earth, ashes (used as a fungicide) and very strong animal glue. This layer is usually thick, very hard, sensitive to water, and sometimes presents deep cracks.

The paint layer consisted of colours made from organic and inorganic pigments. They were extracted from plants (e.g. indigo), insects (e.g. cochineal) and minerals (e.g. 'alballalde' or lead white). During the early Colonial period 'colores de Castilla' were imported from Spain but later almost all the pigments were produced in America [1]. Glazes were transparent pigments dissolved in resins or gums that are very sensitive to water. Since pigments were mostly locally produced and varied from area to area, often pigments which appear similar react very differently to solvents during the cleaning process [2].

Mediums were also locally prepared by the painters. The most common combination was a mixture of egg yolk with linseed or walnut oil. Others were gums extracted from fruit trees, gum tragacanth, gums or mucilages extracted from cactus plants, and resins such as copals. Very often the paintings were not varnished.

Both the paint layer and the protective layer contained substances like polysaccharide gums and mucilages. Among those commonly found are acacia gum (gum arabic) and gum tragacanth, as well as Senegal gum, cherry gum, plum-tree gum, willow-tree seed and other unknown gums awaiting further research. Some of them were most likely mixed with alcohol. Their most important characteristics are that they dry out, do not crystallize and are only partially soluble in water. Moreover they are prone to attack by fungi and other microorganisms.

Proteinaceous or albuminous materials like white of egg, casein and egg yolk are found mixed with oils or gums, which become very hard. They darken and give a grey tone that 'kills' the brilliance of the original colours, leaving an almost irreversible layer over the entire painting.

When oils were used, they often contained impurities like dust or plant mucilages that appear as small rough dark spots deeply ingrained in the paint layer.

The resins found include Peruvian balsam and Tolu balsam,

both from trees growing on the Pacific coast of South America. These are insoluble in water. More common was the use of copaiva balsam which does not evaporate completely and has a long-lasting softening effect [3]. Mastic was less popular because it was imported from Spain and therefore more expensive.

Occasionally, when the same materials were utilized as both protective layer and medium, they have become inseparable from each other.

The dirt particles that were deposited on the surface of the paint film or the protective coat as they dried, the coarseness of the surface, the decomposition of the materials and the growth of moulds, etc., make the cleaning process extremely arduous. The eccentricity of the methods and materials used and the damage caused by harsh environmental conditions never cease to surprise restorers.

Another problem is attack by insects, bats and birds which nest in the churches, on the beams of the ceilings and behind paintings and other art objects, depositing eggs, excrement and urine on them. This damage is accompanied by fungal attack [4].

A strange phenomenon was the appearance, under the grey, darkened protective layer, of light and dark stains in the form of drops, as if the pigments, reacting to the acidity or salts of water during the rainy seasons, had 'blanched'. Since there was no way to remove these spots, it was decided to cover them during the retouching process.

The difficulties encountered during the cleaning of Colonial paintings are numerous and often only improvisation helps us to find the most suitable method. The exact materials the painters utilized are still a mystery which we have to resolve.

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