Conservation Problems of Some Objects in Francisco de Paula Santander (Colombia), a House Museum

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Introduction

Francisco de Paula Santander (1792-1840) is one of the key figures in the history of Colombia (Figure 1). He fought side by side with Simon Bolivar during the war for independence. After Bolivar’s death, Santander became the first elected president of La Gran Colombia. He is known as “The man of the laws” because, after Colombia gained independence, he consolidated the territories of the new republic, reformed the financial and educational system and established diplomatic relations with other countries [Bushnell, 2007].
The house museum is located in the northeast of Bogota. Built in 1620, it was originally a country house (Figure 2). Currently, the house preserves its spatial conception and its architectural style with four facades, open balconies, stone pillars on the first floor, wood pillars on the second floor and thick walls in masonry built with a mixture of lime, sand bricks and stone. The roof is clad with terracotta tiles.

Fig. 2a and 2b. Facade of the house.
The building was previously known as “Hacienda el Cedro” and was constructed by Spanish conquerors. One of them, Antonio Dias Cardoso, received a vast terrain of forest and named it “El Cedro”. Since then, the house has had numerous owners and several important events happened there. In 1891, during one of the many civil wars, Conservative troops used the building as their headquarters. The troops were attacked by Liberal forces, who burned the house. In 1906, Francisco Fernandez Bello bought the house. Bello left the house to his son Jose Fernandez on his death. The inheritance continued to the next generation, Cecilia Fernandez de Pallini. In 1978, work began on the structure to repair the damages of another later fire. The aim was to recover the surroundings of the house and create a museum [Sociedad, 2008].

The museum was inaugurated in 1982. The collection is located in the second floor (Figure 3). It consists of objects and artifacts relating to Santander. The objective of the museum is to honour and preserve the legacy of Santander while educating the public and future generations about him. The museum has sixteen rooms, seven of which are external galleries and nine are internal. The objects and the furniture are exhibited to resemble an eighteenth century house. At the beginning of a visit, visitors learn about Santander and his family by observing some of his personal effects and those belonging to his wife and daughters. Some items that can be seen in this part of the museum are clothes, photographs of Santander’s daughters and furniture.

The second part of the museum shows Santander as a General of the Republic. Here military uniforms, flags, paintings of Bolivar, Santander and other generals, and weapons are displayed. The visitor can also view scale models of the battles of “Pantano de Vargas” and “Boyaca”. The third section of the museum shows Santander as “the man of the laws”, exhibiting his private office with furniture, official letters, books about him and images of preliminary versions of the coat of arms of Colombia ordered by Santander. The fourth section of the museum pays homage to Santander and his legacy. Artifacts dating from his death to present times are presented to the viewer. Here, there are images, commemorations, letters, diplomas, flags and coins.

The fifth part of the museum consists of a room dedicated to Santander as President of the Republic and also shows pictures of all his successors including the current president. Finally, the visit ends with a room that explains the history of the Hacienda and shows pictures, historical documents, scale models and furniture.

Fig. 3. Map of the house museum Francisco de Paula Santander
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The house museum Francisco de Paula Santander has a mixed collection with around 1500 objects, all of them exhibited. The collection consists mainly of fabrics, furniture, paper, hair samples, photographs, easel paintings and pastel paintings – all organic in nature. The collection also contains some inorganic objects, such as ceramics and metals. This paper will summarise the results of a project implemented to investigate the current conditions of the house and the collection. A selection of 56 high value objects was made, including Santander’s bed, a wooden cross, an inkwell, Santander daughter’s photo album, hair samples of Santander’s daughter and wife (Figure 4). These artifacts are considered important because they were everyday objects used by Francisco de Paula Santander, his wife Doña Sixta Pontón de Santander and their daughters.

Table 1: Agenda for the map of the house museum Francisco de Paula Santander

![Table 1: Agenda for the map of the house museum Francisco de Paula Santander](image)
The project lasted for one and a half years (2011-2012), the objective being to establish a preventive conservation plan for the house museum. For this it was necessary to know which conservation problems the museum and its collection faced. The guideline used is the *Modelo de análisis de conservación para museos* developed by the Universidad Externado de Colombia [Fernández et al, 2005]. This model divides a museum in four components: administrative, infrastructure and environment, collection and society. Based on this division numerous actions were taken. The first one was drawing the floor plans of the house and identifying the location of the objects in each one of the sixteen rooms. The second was establishing a complete photographic registry of the place and the collection. After that, luminosity and relative humidity were measured in twelve rooms. Finally, a registry of the conservation status of the collection was written. Also, visitors were asked to take a survey and express their opinions about the museum. After analysing these information, a diagnosis revealed the main problems of the collection, among which the most prominent are:

*Fig. 4b, 4c, and 4d. Personal objects of Santander.*
Infrastructure

The building edifice requires repair, especially to the roof. Neglect and decay have resulted in leaks that affect the collection in three internal rooms, so-called Hall, Habitacion de descanso del general and Biblioteca. In the Hall, water drips directly over a piece of furniture of Imperial style, a table and the carpets. In the Habitacion de descanso del general water runs over the rails of Santander’s bed and continues onto the floor. In the Biblioteca, water runs over an old light bulb socket and lands over a table.

Air quality

The museum has sources of pollution nearby, such as a main highway and the chimneys of residential complexes. There are not enough sources of ventilation due to the fact that air enters through two doors with access to a closed patio. The lack of a periodical cleaning program has produced concentrations of particulate material affecting the collection. The collection in open and closed display cases presented high levels of particulate material.

The architectural design of the house has generated different environments in the external and internal exhibition rooms. The internal rooms have thick walls and are cold, with windows near the ceiling so natural light does not fall directly and affect the collection. Relative humidity (RH) and temperature (T) were measured in twelve rooms. In the Habitacion de descanso del general records showed a large variation of RH between 63.8% and 55.3% and a T variation between 18.2 and 15.2 degrees Celsius, while the room Batallas presented a variation of RH between 63.1% and 59.3% and a T variation between 17.8 and 16 degrees Celsius. As a result, objects consisting of organic materials are being affected by a white-coloured fungus. In the first room, the fungus is present in a box containing hair samples of Santander’s wife, on fans, in a photo album, in books and on Santander’s bed. In the second room, the fungus affects uniforms and hats and the display case where they are located. On top of this display case there is a high concentration of particulate material and more fungus. According to analysis carried out by the author, the fungus is using the highly concentrated particulate matter as a feeding ground,
fuelled by the lack of air circulation and the elevated level of relative humidity throughout the house [Calvo, 1997; Garry, 1998; Michalski, 2009a, 2009b, 2009c].

**Luminosity**

The external rooms facing west and north receive direct sunlight during the afternoon. In these rooms there are windows and also closed balconies with glass. The temperature of these areas in the afternoon varies between 21.3 and 17.9 degrees Celsius. The majority of exhibited objects in these rooms are of organic nature,
such as fabrics, wood, paper, photographs, posters and easel paintings. According to the measurements taken, the luminosity levels are superior to 300 lux, the recommended level for such displays [Michalski, 2009b]. The curtains on the windows do not stop sunlight from reaching different areas of the collection and the rooms. Sunlight affects these objects, such as wood, fabrics and paper, negatively. These materials are very sensitive to high levels of visible light and ultraviolet radiation. The result of long-term exposure has been chromatic degeneration to the surfaces causing a yellow-like tone, dryness and has increased photo oxidation processes. For this type of material it is recommended that the exposure to light never reaches values higher that 50 lux [Michalski, 1998, 09; Calvo, 1997]. Examples of deterioration can be seen on the clothes of Santander’s daughters and wife.

In order to establish a solution strategy, problems were labelled according to the urgency for a solution. The three problems mentioned above belong to Level 1 that is, urgent. It was recommended that solutions be found for these problems in less than three months. To resolve these issues several preventive conservation actions were suggested.

To resolve the problem of water ingress to the edifice, it was recommended to secure leaks in the roof thus eliminating further damage due to water running over objects. Ceilings and covers were also inspected. It was recommended that biological deterioration caused by fungal growth could be prevented by first determining the type of fungus affecting the collection and then taking measures to prevent its growth. It is also important to implement a regular cleaning schedule for the collection, as well as a continuous observation in order to note further deterioration. Finally, for the third problem, actions to mitigate natural illumination are suggested, in particular installing protective layers, such as curtains or blinds, in front of the windows that reduce the levels of sunlight entering the building. It has been determined that the problems described adversely affect the collection, in particular those artifacts of organic nature, which are the most valued because these consist of the everyday objects of Santander, his wife and his daughters. It was established that the analyses of relative humidity and temperature were useful and
necessary since they allowed the determination of environmental factors that affect the collection. The accumulated data has provided solutions to the problems encountered during the research project.

**Conclusion**

The research project has allowed a detailed study of the museum, its building and its collections.

Reviewing the data collected, it can be concluded that the museum had several problems of different nature, all of which required different solutions. Identifying specific problems led to finding individual solutions that could be quickly implemented, thus further damage to the artifacts entrusted to the care of the museum could be prevented by addressing these issues. Solutions were formulated based on theoretical guidelines and subsequently put into practice. These could be implemented using the museum’s own resources.

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**References:**


