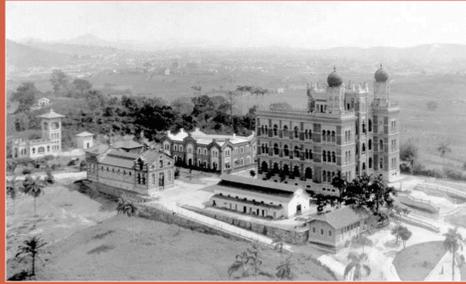


Preventive conservation of ensembles: Moorish Pavilion and Collections - Fundação Oswaldo Cruz

Introduction

Fundação Oswaldo Cruz (Fiocruz) is an institution linked to Brazil's Health Ministry, created in 1900 with the goal of fighting the great problems in the Brazilian public health care system. Its headquarters is located in the neighborhood of Manguinhos, in the north zone of Rio de Janeiro.



The Moorish Pavilion was constructed between 1905 and 1918 to house the activities of the institution (laboratories, library, museum and offices). Listed by the Instituto do Patrimônio Histórico e Artístico Nacional, the building follows the trend of architectural composition of the late 19th and early 20th century in Brazil - Eclecticism - revealing influences of Moorish architecture. It is located high on the slopes of the terrain of the institution, next to Guanabara Bay and to Avenida Brasil – pathway that receives the daily number of vehicles crossing the city.



Moorish Pavilion – main facade

Presidency Hall

Library Reading Room

The building houses the Rare Books Section of the Biomedical Sciences Library; the Entomological Collection; and part of the Museological Collection. The combination of the building and the collections housed in it is an interesting example for reflection on how to act to improve the conditions of the set in a balanced manner, arising from a concern for the coexistence of historic structures and artifacts. In order to improve the preventive strategies related to the conservation of the ensemble a multidisciplinary team carried out a conservation assessment of the building and the collections. This poster aims to present the results of this research.

BUILDING + COLLECTIONS



RARE BOOKS SECTION
About 40.000 volumes in the areas of natural history, biological sciences, medicine and public health, published between the 17th and 20th centuries



ENTOMOLOGICAL COLLECTION
Approximately 5 million insects collected since 1901 by the first scientists of the institution



MUSEOLOGICAL COLLECTION
Approximately 2.000 items in the area of science and technology in health, including instruments and laboratory materials.

Methodology

The work was based on the assessment methodology developed by the Getty Conservation Institute (*The conservation assessment: a Proposed Model for Evaluating Museum Environmental Management needs*) and previously used in other Brazilian institutions. It proposes an integrated analysis of macroclimate, the building, the collections and organizational aspects influencing their conservation.

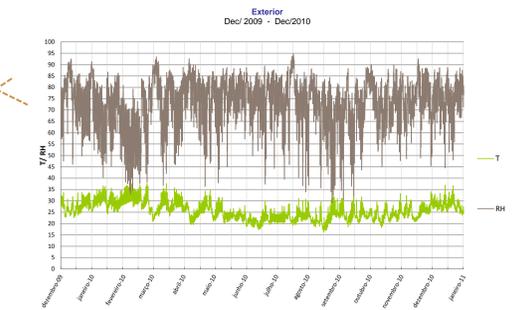
For the development of the research was defined a multidisciplinary team of technicians from Fiocruz (conservators, architects, librarians, archivists, museologists, biologist), who had the support of the technical staff of the House of Rui Barbosa Foundation. For the diagnosis of the collections was also hired a consultant specialized in conservation of collections.

Results

Macroclimate

The diagnosis of environmental conditions began with the collection of data relating to the city of Rio de Janeiro (temperature, relative humidity and rainfall). Rio de Janeiro has a tropical climate, with averages ranging from 77% to 80% (RH) and 19° C to 30° C (T).

A datalogger was installed outside the building to record environmental data on the site. The data collected revealed high RH and T throughout the year, reaching 95% RH and 38 °C. Further information about air quality and air movement in the city were raised. The region reveals high rates of gaseous and particulate, in view of the heavy flow of vehicles around.



The building

During the first phase of the assessment the technical documentation of the works previously performed at Moorish Pavilion was organized and analyzed. This analysis allowed the identification of some vulnerable points of the building, such as the elements located on the roof (terraces, towers and turrets) in relation to environmental factors of deterioration.

The second phase included field visits for gathering information on the state of conservation of building materials and fittings. The assessment included a detailed survey of the impacts of the existing HVAC system (installed in the 1990's). It was observed the presence of mold and degradation of construction materials, effects related to condensation caused by the cooling system.



Metal corrosion

Condensation



Pollutants

Disintegration / Mold

The collections

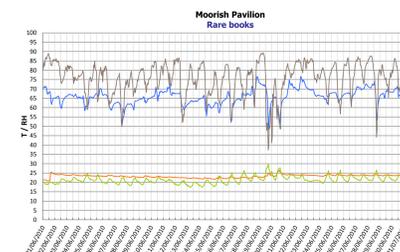
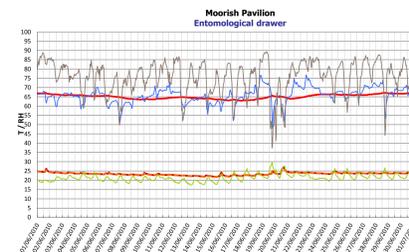
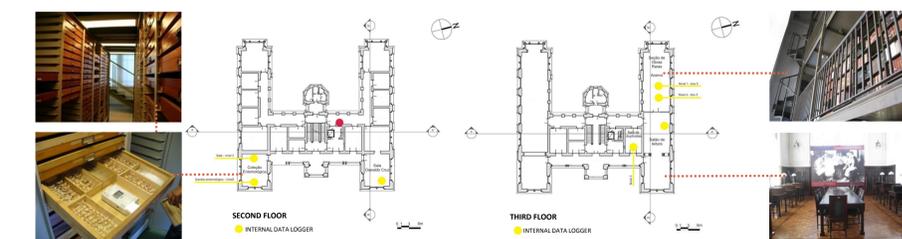
Interviews with curators were conducted to collect information on the methods of storage and exhibition of collections, routine cleaning and maintenance. In the Library, a survey was conducted by random sampling to quantify the frequency of damage. The diagnosis indicated as main problems insect damage, brittle paper and damaged paper covers.

The main risks identified for the museum collection are related to physical forces, because of the way objects are arranged on the environment and the proximity of visitors.

Environmental monitoring

Dataloggers were installed in different areas of the building that house collections. The RH and T data collected were organized in monthly charts for each of the monitored points. From the analysis of the data and the issues raised by the diagnosis conservation of collections was possible to evaluate the impact that environmental conditions in places where these collections are housed have on their conservation.

In the Library, the evaluation of monitoring data indicated that the existing HVAC system, although designed to ensure conditions for the conservation of the collection, has been unable to properly maintain the environment stable and below 65% RH.



Regarding the Entomological Collection storage area, where there is no air conditioning system, the data collected in the room showed high levels of relative humidity and temperature. The data collected inside the drawers of the collection, however, indicated that the entomological drawers and the sliding file sealing system have been functioning as barriers, ensuring a more stable microenvironment and with reduced values in relation to room RH and temperature.

Organizational aspects

The work also included the analysis of existing standards and preservation policies. Despite the sectors responsible for each of the collections and the building have several routines implemented for the conservation of these objects, the diagnosis revealed the absence of an overall plan that takes into account the specifics of each part of the ensemble.

Conclusions and recommendations

The conservation assessment of Moorish Pavilion and Collections sought to identify the vulnerabilities of existing materials in the building and collections; analyze environmental conditions and how they contribute to the degradation of materials, and to make connections between observed conditions and mechanisms of deterioration. The information collected is being used to support the design of a new HVAC system, less intrusive to the building and appropriate for the collections. The analysis carried out during the research project will be important to establish a **preventive conservation plan**, which will set up priorities and intervention strategies in the set, including guidelines for environmental management and integrated pest management.

Teams involved:

FUNDAÇÃO OSWALDO CRUZ

- Casa de Oswaldo Cruz
- Instituto de Comunicação e Informação Científica e Tecnológica em Saúde
- Instituto Oswaldo Cruz

FUNDAÇÃO CASA DE RUI BARBOSA (Technical cooperation)

- Cláudia Carvalho - Núcleo de Preservação Arquitetônica

PAPEL E NATUREZA ACESSORIA EM PRESERVAÇÃO (Consultancy)

- Ingrid Beck - Director

ACKNOWLEDGMENTS

- This work is the result of the research project "Preventive conservation of collections preserved by the Casa de Oswaldo Cruz", funded by the Support Programme for research and technological development - Casa de Oswaldo Cruz / Fiocruz.

- The author would like to thank FAIC/Latin America and Caribbean Scholarship Program and GCI for the opportunity.

