# On-site assessment of the status of historical libraries as part of the conservation training process

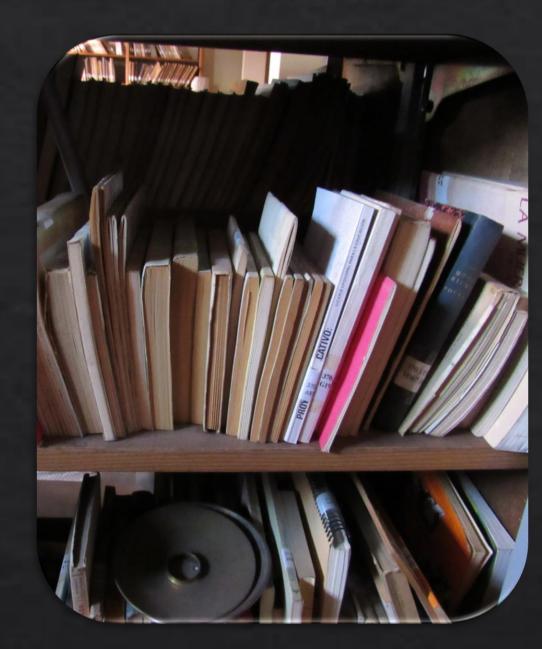
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#### Introduction

The evaluation of the state of conservation of large collections is a complex task, taking a long time to work and the need for experts to accurately identify physical, chemical, and biological deterioration a problem registered in heritage historical libraries universally.

The implementation of this work methodology has been carried out for 5 years through the subject of "Biology applied to the conservation and restoration of heritage program", integrating direct work in the evaluation of universities, libraries, archives, and museums, working directly with conservation-restoration students.





## Objectives

The objective is the quantitative evaluation of deterioration (QED) of large bibliographic collections, based on the identification of in situ deterioration. A fundamental tool for the recognition of the individual and total conservation status of the collections, for objective decision making.

#### Bibliography

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Kačíka, F., D. Kačíkováb, et al. (2009). "Cellulose degradation in newsprint paper ageing." Polymer Degradation Wilding, M. and M. M. Houck (2009).
Optical microscopy for textile fibre identification. Identification of Textile Fibers, Woodhead Publishing: 133-157.and Stability.
Piotrowska et al. (2014). "Abiotic Determinants of the Historical Buildings Biodeterioration in the Former Auschwitz II Birkenau Concentration and Extermination Camp."

Quitral, Y. and R. Solis (2015). "Approach to the identification of fungal agents in biodeterioration control." ph investigación.

Conference of Conservation Science Education Online (CSEO)



#### Methods

Chemistry and biology of materials.



On-site applicable laboratory tests.



Identification of physical, chemical, and biological damage



Application to large collections (data program)



Quantitative evaluation of deterioration (QED)



Appropriate interventions and conservation process.



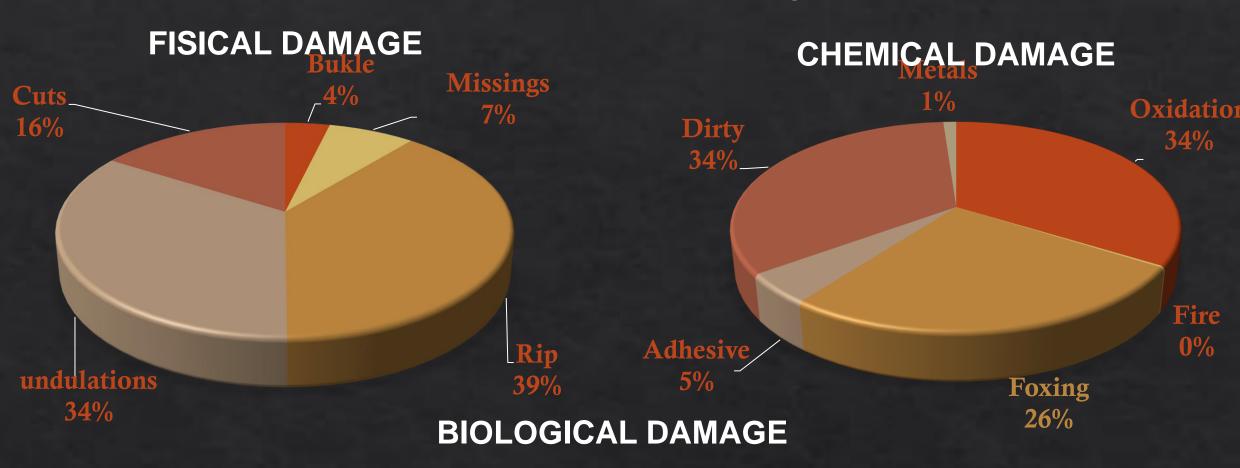
### Results

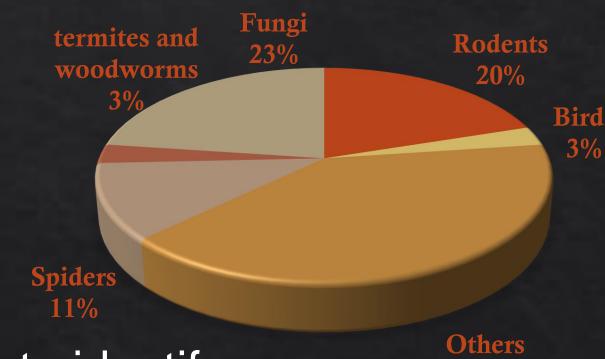
As a main result, the bibliographic collection presents 12% in a regular state of conservation, 1% in poor condition, and 87% in good condition.

The main physical damage presented is rippling (39%) and undulations (34%), and as main chemical damage the presence of oxidation (34%) and surface dirt (34%) and foxing (26%).

Biological problems such as insects (40%) and rodents (20%) appear in the majority affecting the collection.







## Conclusions

At the end of the registry, we will be able to identify:

- Number and percentage of bibliographic assets affected by each type of deterioration for a full collection.
- Implementation of teamwork in the study of large collections
- Application of basic scientific analysis in the recognition of deterioration agents
- Discussion of conservation criteria to be implemented according to the results

