

**PREVENTIVE CONSERVATION AND PESTICIDE USE:
INVESTIGATING POTENTIALLY CONTAMINATED
ORNITHOLOGY AND MAMMALOLOGY COLLECTIONS IN
ZIMBABWE'S MUSEUMS.**

DAVISON CHIWARA, PHD CANDIDATE UNIVERSITY OF PRETORIA

SIONA O'CONNELL (PhD), LECTURER UNIVERSITY OF PRETORIA

MAGGI LOUBSER, LECTURER UNIVERSITY OF PRETORIA

ISABELLE MCGINN (PHD), LECTURER UNIVERSITY OF PRETORIA



UNIVERSITEIT VAN PRETORIA
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YUNIBESITHI YA PRETORIA

WIDESPREAD USE OF PESTICIDES

- Museums mainly rely on pesticides for pest control
- Naphthalene is widely used
- Other pesticides used are not known because of inadequate documentation



Pest control is outsourced to pest control companies/ individuals. Therefore some of the pesticides that are applied are not known by museum staff. There is foul smell in storage places.





HISTORICAL TREATMENT OF COLLECTIONS

- The museums hold collections that date back to the C18th-C20th
- Chemical treatment for collections against pests for this period is inadequately documented

The museums are home to artefacts that were collected from Africa, Europe, Asia, South America and the United States. The period in question was characterized by the widespread use of harmful pesticides such as arsenic and mercuric chloride. It is possible that the collections are contaminated with these harmful inorganic and organic pesticides.

ANALYSIS OF COLLECTIONS

- XRF analysis
- Chromatography

Working in collaboration with the Department of Tangible Heritage Conservation at the University of Pretoria, we are currently investigating the inorganic and organic pesticides on collections at the Natural History Museum of Zimbabwe using XRF (for inorganic pesticides) and chromatography (for inorganic pesticides).

GOALS

- We would like to establish safety protocols for the handling and use of contaminated collections to facilitate safe research and learning at the museum
- We are working towards ensuring that museums limit the use of pesticides by adopting IPM methods that work within the realities that we are faced with in Africa.

Generally there is lack of awareness in the museums about the dangers of contaminated collections to people's health. We observed that staff were not using gloves in handling collections and they were working in storage places without face masks. We alerted staff about the dangers this would pose to their health and they are now cautious when working with these collections. We also are seeking to ensure that the museums adopt affordable non-pesticides methods in the control of pests.