

A Supplementary Project Proposal

Digitization of the East African Herbarium (EA) Card Index for Public Access

Submitted to:

Center for Research Libraries (CRL) &

Cooperative Africana Materials Project (CAMP)

Submitted by:

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Introduction

Digitization is currently recognized as a core activity of modern museums the world over. There is an urgent need for the historical collections to be accessible to the society by a click of a button. This way, members of the public will benefit and appreciate the existence of the information made available. As facilities funded by the public, museums need to reach out and connect with society now more than ever before. Only then can they educate and entertain the digitally inclined general public, inform decision makers and above all, justify their existence. By digitizing its collections, the National Museums of Kenya (NMK) will among other things benefit from publicity associated with exhibiting its intellectual wealth as well as enhance conservation of priceless heritage. NMK however recognises that it is not in a position to execute such an intricate task on its own, and seeks to collaborate with Centre for Research Libraries (CRL) who has a track record in implementing such projects.

Project goal

To make freely accessible all the index cards of local names of the plants of East Africa and beyond preserved at East African Herbarium (EA) library.

Objectives

1. Digitize all the local plant names index cards held at EA library
2. Maintain digital collections and provide online access to the index cards
3. Enhance physical preservation of the cards for future reference

Project deliverables

1. 100,000 digital images of index cards with their corresponding metadata
2. Digitized images freely accessible on the online platforms
3. Original materials, (index cards) stored in archival boxes

Card index of botanical and local plants names

EA Herbarium holds some 100,000 index cards bearing botanical names of plant species and the corresponding local names in various languages. These cards measuring 5" x 3" are complementary to the herbarium collections as each has a corresponding herbarium specimen preserved at EA. Plant species represented are those found in Kenya, Uganda, Tanzania, Somalia, Zambia and Ethiopia. These cards are very useful to botanists responding to requests for identification of sterile specimens bearing only a local name. The botanists consult the cards to match the provided local name with the scientific name on the card then verify the identity with the preserved herbarium collections dating back to 1895. These cards are not stored in ideal conditions as they are exposed to moisture, extreme light and dust. Therefore, there is an urgent need for digitization so that the public can have free access to the cards, while minimizing physical handling and the associated tear and wear. Their physical preservation preferably in archival boxes is also required after the

digitization, since the cards remain the original reference for the digital content developed.

The digitization will be done in two phases;

Phase I

This phase will start with a two days capacity building workshop that will be held to train the project officers as well as other National Museums of Kenya staff involved in digitization of museum collections. The project will aim to scan and digitize 50,000 images of the index cards. The images will be cleaned and validated by the two principal investigators in order to meet the required Center for Research Libraries standards. The validated images will be made available online as the project progresses. This will help the public have access to the images without having to wait for the completion of the project.

Phase 2

In this phase, the remaining 50,000 cards or more will be scanned and digitized and freely made available online for public consumption. A dissemination workshop will be held in second phase of the project to share the data generated. All the images generated will be shared with Center for Research Libraries for hosting.

Method of copying the material and daily workflow

The cards will be digitized through high resolution scanning followed by manual entry of the data into a database template. Each card will be scanned on its own in order to capture all the data contained therein. Since the cards are arranged according to local names; the local dialect will be used as a basis for classifying them. The cards will also be given an accession number for internal use. All the data generated will conform to the Centre for Research Libraries (CRL) digitization standards. The content created will be saved in Tagged Image File Format (TIFF) and Portable Document Format (PDF) versions.

- Tiff images
 - ◆ Tiff creation will be scanned at a minimum of 300dpi
- PDF images
 - ◆ Excessive borders will be cropped out
 - ◆ Scans will be Deskewed where necessary
 - ◆ Optical Character Recognition (OCR) embedded
- The metadata will include the following;

What? The material to be digitized (Cards)

Who? The author of the material (collectors)

When? When was the material created or collected

Where stored? All the cards are at EA Herbarium library

Owner of the material and data; NMK shall retain the ownership of the information to be generated

Reproduction of material; CRL will be assigned rights to store, access and reproduce the material not for profit purposes

To ensure that quality assurance is achieved, the principal investigators will clean, and validate the data generated by project officers before its transmission to CRL.

Metadata

Metadata standard: Dublin core

Level of metadata to be applied: Level I

Metadata will be prepared by the project applicant

MARC bibliographic records will not be created

Metadata will be harvestable using OAI-PMH standards

Access

The delivery system: Files will be accessible through website portals e.g. National Museums of Kenya, GBIF, British library, Kenya National Archives, Kenya National Library

Files Format: The files will be in .tiff format

The data will be freely available on the internet

The data will be searchable using any browser e.g. Internet Explorer, Google chrome, Mozilla Firefox, Safari, Opera

The metadata will allow easy harvesting of data

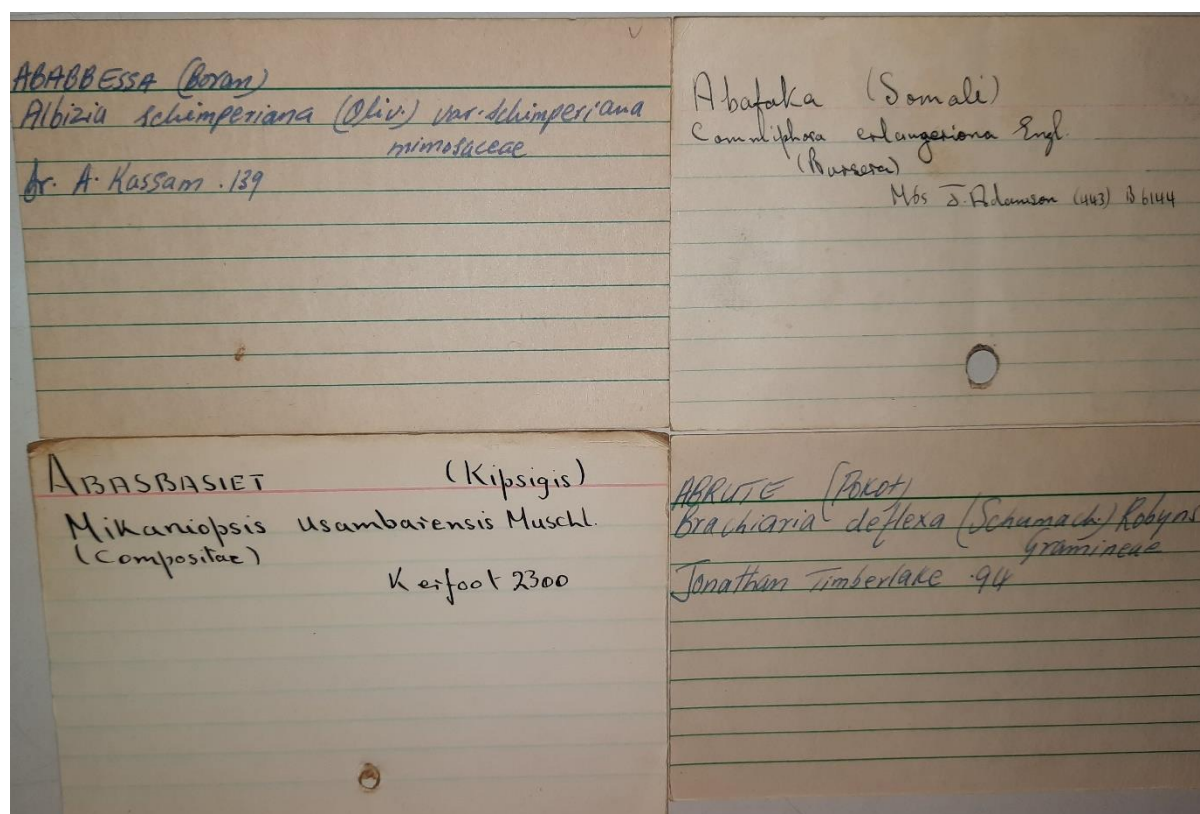
Archiving

The data files will be preserved in the cloud, National Museums of Kenya servers as well as in the eGranary. Centre for Research Library will also have the rights to archive the generated data files.

The data will be delivered to Centre for Research Library (CRL) mainly through Google drive; at the end of each phase the data will also be packaged into CDs/DVDs and dispatched to CRL through courier services.

The original material will be preserved in acid free archival boxes and deposited in our archive department where the environment is air conditioned.

A sample of the cards to be scanned and digitized



Dissemination of data generated

The results generated will be disseminated through workshops, seminars, conferences both locally and internationally. The principal investigators will also participate in public lectures both at the National Museums of Kenya and in some selected universities where we have partners e.g. University of Nairobi, Kenyatta University, Meru University of Science and Technology, Moi University and Karatina University. The data will also be shared with other institutions such as the British Library, Smithsonian Institution, The national archives and libraries of Uganda, Tanzania, and Ethiopia. For quick access to the digitized contents as the project progresses, the generated data will be posted to the National Museums of Kenya website www.museums.or.ke where a link will be shared with those who wish to access the digital copies.

Capacity building

Capacity building is needed for the staff who will be involved in digitization of the cards as they lack formal training on digitization of axillary botanical collections. During the training other staff digitizing museums' collections will be trained to build a wider human resource; these will include library staff and ICT personnel. A professional consultant will be hired during the training. The capacity building will be continuous even during digitization period to make sure that the resultant data conform to the required standards.

WORKPLAN

Workplan showing sequence of the planned activities in Phase I

Activities/months	1	2	3	4	5	6	7	8	9	10	11	12
Constituting the project team/NMK employment process												
Purchase of equipment												
Training workshop												
Scanning of cards												
Data validation												
Data cleaning												
Web hosting												
Submission of phase I data to CAMP												

Workplan showing sequence of the planned activities in Phase II

Activities/months	1	2	3	4	5	6	7	8	9	10	11	12
Scanning of cards (Continuation)												
Data validation												
Data cleaning												
Web hosting												
Dissemination workshop												
Submission of phase II data to CAMP												
Closure of project												

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