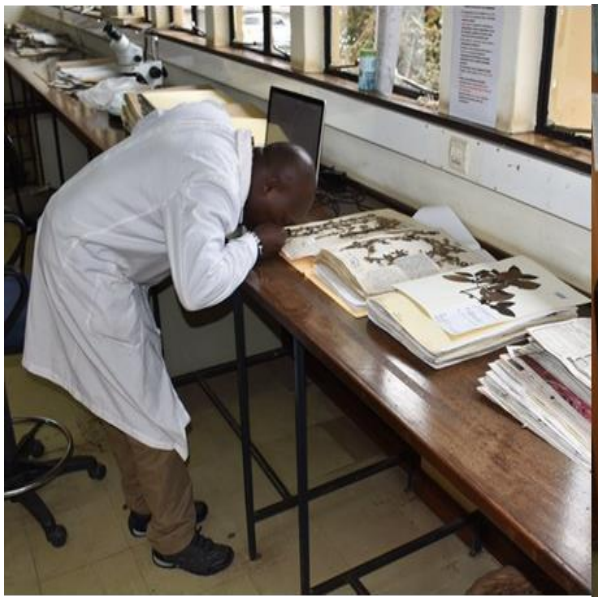
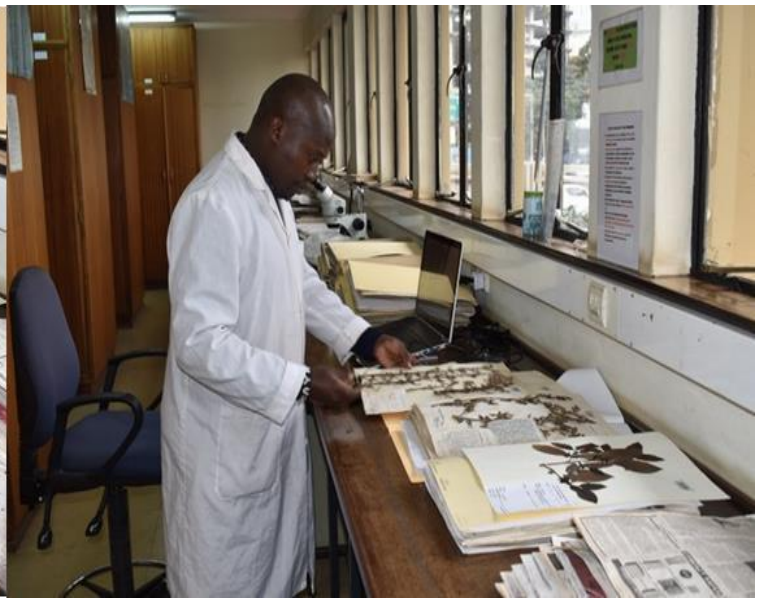
Course IV: Herbarium in Biodiversity Conservation

6th and 7th June 2024

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Brief course introduction:

- Herb-aria play a pivotal role in biodiversity conservation, offering an extensive repository of botanical data, collections and matching expertise on plant diversity, distribution and ecology
- Herbarium specimens are indispensable for taxonomic research, facilitating accurate identification and classification of plant species. Furthermore, they serve as a cornerstone for understanding the evolutionary relationships among plants and for cataloguing newly discovered species.
- Herbarium collections provide a historical record of plant diversity, their niches and uses, enabling scientists to monitor changes in species distributions and abundance and their roles and values.
- By comparing historical specimens to contemporary collections, researchers can identify species that are experiencing declines, expanding their range, or facing extinction.
- Herb-aria are instrumental in shaping conservation policy, planning, practice and innova

Aim of the course:

Participants can anticipate gaining valuable knowledge and skills in herbarium techniques and their practical application. The course will train:

- Principles of plant collection, identification, processing, and preservation.
- Hands-on practice in plant collection techniques and identification.
- Importance of herbaria in botanical research; planned visits to the Mycology, Ecology & Botanical Garden Sections.

Provisional course outline:

The 2 training days will be split between brief lectures and field activities as follows:

Day 1	Day 2
Introduction to herbarium technique and their importance in botanical research	Introduction to Botanical Gardens and their evolving /complementary roles: Education, recreation, Research and conservation Acquiring Botanical Garden Collections Garden interpretation: Educating the users
Principles of plant collection & Ethical considerations	Practical applications of Herbarium data in biodiversity management (IUCN & CITES)
Hands on practice on plant collection techniques	Introduction to mycology and its application
Plant identification	Ecological approaches and application for conservation

WHAT TO BRING:

- Lab coats, Walking shoes

Participants will:

1. Be expected to fill a simple training survey

2. Do a brief training report at the end

Facilitators profiles:

Dr. Veronicah Ngumbau: Senior Research Scientist, Head Training Section, Botany department. Specialist in plant taxonomy, biodiversity assessment, species assessment, and conservation.

Ms. Agnes Lusweti: Research Scientist, Botany Department. Experienced in botanical research, grant writing, project management and Botanic Garden development.

Ms. Susan Kabacia: Research scientist, Mycology section, Botany department. Specialist in macro and microfungi taxonomy and its application in agriculture and food industry.

Mr. Christopher Chesire: Research Scientist, Ecology section, Botany Department. Specialist in Tropical Forest ecology, Taxonomy and conservation

NMK is a State Cooperation established by the Museums and Heritage Act. It is a registered Multidisciplinary Research Institution and a center of excellence in heritage research, conservation and management. The Directorate of National Repository and Research (DNRR) coordinates research at NMK and manages the National Scientific Reference Collections. DNRR collaborates with National and International institutions in implementing its mandate, and has a mission to collect, preserve, study, document and present Kenya's past and present cultural and natural heritage. The vision of DNRR is to be a center of excellence in heritage management and research for posterity. The directorate has various departments whose mandate is research dissemination through publications, exhibitions, industrial attachments and trainings.

The East African Herbarium (EA), a part of Botany department, houses the largest botanical collection in

tropical Africa, with over 1 million plant and fungal specimens. EA serves as a critical botanical reference center both regionally and nationally. Its research predominantly centers on the taxonomy, distribution, utilization, and conservation of East African flora. This course will emphasize the principles of plant collection, identification, processing, and preservation, providing practical experience in plant collection techniques and identification. Additionally, the course will highlight the significance of herbaria in botanical research, including planned visits to the Mycology, Ecology, and Botanical Garden Sections.