



---

## **CALL FOR WORKSHOP PARTICIPANTS:**

### **MOLECULAR ECOLOGICAL NETWORK ANALYSIS IN AKAGERA NATIONAL PARK**

Quantifying biodiversity is essential to conserving it. Molecular Ecological Network Analysis (MENA) using environmental DNA (eDNA) offers a systems approach to measuring ecosystem recovery and change through next-generation, and quantitative, molecular assessment of biodiversity and ecological impact. MENA can be used to address gaps in ecosystem understanding, including inventorying biodiversity and connectivity in a system, inform specific management interventions and activities, and as a tool for conducting research into deeper scientific questions.

Akagera Management Company was created from the agreement between African Parks and the Rwanda Development Board to manage Akagera National Park (ANP). AMC is seeking to recruit ten (10) advanced students or early-career scientists from the University of Rwanda to participate in a workshop on MENA in ANP to build capacity for using MENA as a conservation tool, and start to answer key questions about ANP's complex ecosystem. Workshop applicants must be Rwandan, be technically-skilled with good problem-solving ability, have a quantitative research background, and be enthusiastic and motivated. **Female candidates are strongly encouraged to apply to participate in this workshop.**

**ABOUT THE WORKSHOP:** Akagera National Park seeks to use MENA to develop a quantitative monitoring scheme to evaluate ecosystem connectedness and change over time, increase capacity in Rwanda for using environmental DNA (eDNA) as a conservation tool, and address gaps in using eDNA methods at a regional and continental scale.

MENA offers a cutting-edge tool to address gaps in ecosystem understanding and improve management of the park through, for example, quantification of species interactions, identification of rare, new, or invasive species, detection of pathogens and transmission pathways, and assessments of ecosystem resilience and restoration.

The workshop seeks the participation of ten (10) advanced students or early-career scientists from the University of Rwanda to receive training in study design and applications of eDNA, field sampling and methodologies, and bioinformatic interpretation of results. The main workshop will run from **August 5<sup>th</sup> to 11<sup>th</sup>, 2024**, and participants are expected to participate in all introductory training and seminars, field sampling and sample processing, and post-field analytical discussions. This workshop will take place in multiple locations and forms, including in-person in Kigali and Akagera National Park, and virtually on Zoom or a similar platform. Some post-field engagements may occur virtually, beyond the official closing of the workshop. Transport, accommodation, and meals will be provided during the field portions of the workshop.

Exceptional performance and effort during this workshop may open further opportunities for continued work with Akagera National Park on the MENA project. Akagera National Park expects to select two to



---

three (2-3) exceptional participants from the workshop who wish to undertake post-graduate degrees using data collected during the MENA project, for further training and mentorship support.

## **RESPONSIBILITIES AND EXPECTATIONS**

### **Responsibilities:**

- Participate in all introductory trainings and seminars on MENA and eDNA applications and methodology, in Kigali, before departing for the field.
- Participate in field sampling and sample preparation in Akagera National Park.
- Participate in all post-field discussions and meetings.

### **Expectations:**

- Participants should be fully engaged, active in their participation, and eager to learn during the workshop.
- Participants should come prepared to the workshop, complete all pre-field activities on-time and in-full, and come with a positive attitude and open mind for learning new, complex material.
- Participants should carry themselves professionally at all times, and follow instructions and directions of leaders, especially in the field.

## **REQUIRED QUALIFICATIONS**

### **Suitable candidates must meet the following criteria:**

- Applicants must be at minimum an advanced student enrolled in the University of Rwanda approaching completion of their BSc in conservation, ecology, natural resource management, genetics, or other relevant fields, OR be staff from the University of Rwanda holding a BSc or higher. Preference will be given to post-graduate students intending to pursue an advanced degree in one of the above fields.
- Have field experience working on research projects in the fields of ecology, conservation, or similar. Must have experience with quantitative data collection, analysis, and report writing.
- Proficient in Excel, R, and other relevant software programs and technical tools. Familiarity with GIS, statistical software, and genetic analysis tools is highly desirable.
- Demonstrate strong analytical and problem-solving abilities.
- Applicants should be eager to learn, open to feedback, and willing to work through complex, new material.
- Strong spoken and written English and Kinyarwanda.
- Willing and comfortable to work in a rural setting, including in proximity to wildlife.
- Applicants must be able to commit to participating in the entire workshop.

### **Additional, preferred criteria include:**

- Have their own laptop, including Microsoft office packages (word, excel, ppt).
- Female candidates are strongly encouraged to apply for this workshop.



- 
- Applicants currently using, or intending to use, eDNA or similar methods in their own research or professions are encouraged to apply.

**NB: Applicants who do not meet the criteria will not be considered.**

## LOGISTICS AND SCHEDULE

### Logistics

- All technical equipment and sampling supplies will be provided.
- Accommodation in ANP, meals, and transport during the field portion of the workshop will be provided.

### Workshop Schedule (Subject to Change)

**August 5th to 10th, 2024**, and some pre- and post-field virtual meetings:

1. **Pre-Field Phase:**
  - **Project Introduction & Virtual Meeting:** Kick-off with an interactive online session to introduce the project and discuss logistics. Connect with fellow participants and leaders.
2. **Day 1 (August 5th):**
  - **Introductory Lecture at the University of Rwanda:** Join us for an engaging lecture open to all staff, students, and the public. Meet your fellow participants and project leaders in person, and get ready for the immersion into a new frontier of biodiversity monitoring.
3. **Day 2 (August 6th):**
  - **Travel to ANP & Settle in:** Begin your journey to ANP in the morning. Upon arrival, dive into advanced presentations on MENA and receive hands-on sampling training at ANP HQ.
4. **Days 3-6 (August 7th-10th):**
  - **Field Sampling Days:** Immerse yourself in full days of sampling water, faecal, and soil eDNA throughout the park. Learn and practice sample preparation and storage techniques in the field.
5. **Day 7 (August 11th):**
  - **Wrap-Up & Departure:** Reflect on your experiences, discuss findings, and prepare for departure from ANP.
6. **Post-Field Phase:**
  - **Follow-Up Meetings & Training:** Continue your learning journey with follow-up sessions focused on laboratory work, bioinformatics, and analytical discussions. Dive deeper into the science behind your fieldwork.

**HOW TO APPLY:** Please submit a cover letter highlighting your interests in this workshop and your relevant experience, how you fit the above qualifications, and how you see MENA or eDNA skills fitting



---

into your future studies or career. Please also include your updated CV with names and contact information of at least two references. Send your application as a single PDF document, with the subject line “MENA\_Workshop\_Akagera\_[surname]” to Akagera National Park at: [amc.recruit@africanparks.org](mailto:amc.recruit@africanparks.org). Please reach out to [drewb@africanparks.org](mailto:drewb@africanparks.org) should you have any questions or queries.

**APPLICATION DEADLINE: Applications must be sent to the email above by 20<sup>th</sup> July 2024.**

Please note that only candidates who submit a complete application packet, and have the required qualifications and relevant experience, will be shortlisted. If you do not hear from us within one week after submission deadline, please know that you have not been shortlisted.

Done in Akagera National Park on 9<sup>th</sup> July 2024



**NDAHIRIWE Ladis**

Park Manager/CEO, Akagera Management Company