

POST CONFERENCE TRAINING
ADVANCES IN FRESHWATER ASSESSMENT USING INVERTEBRATES

6th and 7th June 2024



Course contact nnlaban@yahoo.com

Brief course introduction:

Kenya is a water scarce country. As such, any available clean water is precious. There is need to constantly monitor the health status of our rivers and streams which are our main source our water for domestic and industrial use. The main purpose of monitoring is to maintain the status of the clean rivers, restore the polluted ones or even identify the sources and kinds of pollution.

Aim of the course:

- Basic taxonomy of macro-invertebrates
- Introduction to river health assessments using macro invertebrates (**Lecture**)
- A practical comparison of scores from two rivers of varying pollution levels

What to do and bring:

- Read the provided SASS paper
- You may print and bring a copy of the field guide for macro-invertebrate identifications (Gerber & Gabriel). **However 3 copies will be available for use by the 3 groups**
- Bring a pair of gumboots
- A laptop (Optional)

*** All sampling equipment will be provided by the workshop**

How?

- We will be visiting and sampling for macro-invertebrates in two different rivers in Nairobi. (We hope for conducive and safe water levels after the flooding).
- From the samples, we will calculate a commonly used biotic index; Stream Assessment Scoring System (SASS)
- We will work in 3 groups of 5 (Not individually)

Provisional Course Outline:

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

Date	Morning	Afternoon
6 th June 2024	<ul style="list-style-type: none"> Introduction to macro invertebrates 	<ul style="list-style-type: none"> Field survey in Nairobi river within the Museum grounds
	<ul style="list-style-type: none"> Basic macro invertebrates taxonomy 	<ul style="list-style-type: none"> Field filling of the SASS scoring form
	<ul style="list-style-type: none"> Introduction river health assessment 	<ul style="list-style-type: none"> Calculation of the SASS Scores
	<ul style="list-style-type: none"> Theoretical SASS calculations 	
		<ul style="list-style-type: none"> A visit to the Invertebrates Zoology Museum Collection
7 th June 2024	<ul style="list-style-type: none"> Field survey in Oloolua river within the KIPRE grounds in Karen 	<ul style="list-style-type: none"> Comparison of the SASS Scores from the two rivers
	<ul style="list-style-type: none"> Field filling of the SASS scoring form 	<ul style="list-style-type: none"> Discussions
	<ul style="list-style-type: none"> Calculation of the SASS Scores 	<ul style="list-style-type: none"> Training evaluation and closing

Students will:

1. Be expected to fill a simple training survey
2. Do a brief training report at the end as per the provided template

FACILITATOR PROFILES:



Mr. Laban Njoroge

Mr. Laban Njoroge is a Research Scientist at the Section of Invertebrates Zoology at the National Museums of Kenya. He is both a conservation and medical entomologist with a big passion also for commercial and forensic entomology. He has a BSc. in Botany and Zoology and an MSc. in Medical Entomology and Parasitology. He is currently the curator of invertebrates at the Museums in Nairobi. He has extensive knowledge and experience working with invertebrates and especially of aquatic invertebrates. Within conservation, he is very keen about insects as bio-indicators of ecosystem health. In the medical arena, his main interest is the mosquitoes.



Mr. Morris Mutua

Mr. Morris Mutua is Research Technologist based at the Section of Invertebrates Zoology at the National Museums of Kenya. He has over 18 years of experience in field based research, collection management and students' training. His main area of interest is the beetles.

A brief introduction of National Museums of Kenya

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 Section of Invertebrates Zoology serves as the National Repository for invertebrates. With over 3 million terrestrial and aquatic specimens, it is the second largest collection of invertebrates in the African continent. This resource, the sufficiently equipped facilities as well as the skilled personnel, make the Section well prepared to offer the 'Advances in freshwater assessment using invertebrates' course.