



Gobu Abarufa from Bandi village, Tana River Delta, harvesting his green gram crop. Photo by Hassan Golo

Embracing sustainable agriculture to cope with climate change in the Tana Delta

By Boniface Musyoka

Over the years, communities living in arid and semi-arid flood-prone areas, like the Tana River Delta, have relied on traditional farming methods to grow food crops. One such method is recessionary farming which entails planting crops in seasonally flooded areas after the waters have receded, utilizing leftover moisture and nutrients. In recent times, however, floods have become erratic and farmers have had to endure long and unpredictable spells of drought occasioned by climate change. To deal with these climate challenges, farmers in the Tana River

Delta are adopting modern techniques such as cultivating fast-maturing, drought-tolerant crops. One such crop that has gained popularity and acceptance among farmers is green grams.

"The new variety of green grams we are farming offers better returns than maize or beans which we've grown for years. It is more tolerant to drought, pests and diseases, takes a short time to mature and gives farmers a good harvest," says Thomas Masha a farmer from Sofia village.

During the April-June long rains period, Nature Kenya,

through The Restoration Initiative (TRI) project funded by the Global Environment Facility (GEF) through the United Nations Environment Programme (UNEP), distributed 2,000 kilograms of certified green gram (KS20) seeds to 1,000 farmers. In January, Nature Kenya distributed 1,000 kilograms of green gram seeds to 500 farmers in Maziwa, Feji, Kulesa and other villages. The seeds were planted on approximately 250 acres of farmland, with a seed rate of four kilograms per acre. Monitoring data collected in March and April indicated an impressive harvest of 119,357 kilograms valued at Ksh. 9,548,560 going by the local price of Ksh. 80 per kilogram.

"Increased harvests mean increased food and improved livelihoods. Green grams are well suited for this area," says Rehema Igwo, a farmer from Maziwa village in the Tana River Delta.

Other advantages of green grams over traditional crops like maize, Rehema notes, are their nutritional value. Green grams contain high levels of protein, fibre, vitamins and minerals.

"We use surplus harvest to supplement our household dietary needs. Green grams are a good source of protein," she says.

Other modern agricultural practices being promoted by Nature Kenya include agroforestry, the use of organic manure to improve soil health, and integrated pest management through

combining chemical, mechanical and biological control methods. Farmers have also been trained to identify early warning signs for drought and floods to enable them to plan their planting and harvesting. The farmers have also been linked to extension services offered by the Tana River County Government Department of Agriculture.

"With good agronomic management practices, farmers can harvest up to 540 kilograms of green grams per acre in some areas of the Tana Delta. The Department of Agriculture advises farmers on what crops to grow and what farming techniques to use for good harvests. Additionally, we are continuously working with farmers, sensitizing and building their capacity to monitor the weather patterns so that they can take proactive measures to protect their crops," says Susan Koech, an Agriculture Extension Officer with the Tana River County Government.

Flood recession farming is offering a promising opportunity for sustainable agriculture in the flood-prone regions of the Tana Delta. Farmers in the area are now using sustainable farming techniques to grow crops despite the ever-increasing erratic and unpredictable weather patterns. The shift translates to enhanced food security and improved livelihoods. The farmers' resilience and adaptability serve as a beacon of hope for sustainable agriculture in similar regions. 🌱



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ACTION

Discover the Dawida Eco-resource Centre

Nestled beside the lush Ngangao Forest in Wundanyi Sub-County, Taita-Taveta County, the Dawida Community Eco-resource Centre offers a sanctuary for nature enthusiasts and community members alike. Situated on a serene 1-acre piece of land, the centre boasts an array of facilities including a hall, kitchen, library, office, guest rooms, washrooms, and a camping site. Construction of the centre was funded by the Community Development Trust Fund and was completed in 2015.

Guests at the centre are encouraged to explore its environmental education resources such as guidebooks on birds, trees, and butterflies, as well as newsletters. While these materials are for on-site use only, they enrich the learning experience for visitors and locals.

The centre has conference and accommodation facilities which support the community through income generated from hall hire, accommodation and camping fees. Open Monday to Friday from 8 am to 4 pm, the centre is managed by dedicated volunteers from the Dawida Biodiversity Conservation CBO (DABICO) – the Site Support Group in the Taita Hills KBA.

A perfect starting point for bird walks and outdoor activities, the Dawida Eco-resource Centre is your gateway to nature and community engagement. Community scouts stationed at the centre offer visitors guided tours of Ngangao Forest at a small fee. Come explore, learn, and connect with the beauty of Ngangao Forest!

Planning to visit?

Call John Maganga: +254 (0) 712 329525 or Nathaniel Mkombola: +254 (0) 719 885265



Photo by John Mwacharo



Roseate Terns. Photo by Peter Steward

KBA in focus - Kisite Island

By Joshua Sese

The Kisite Island Key Biodiversity Area (KBA) is a coral island located 8 km offshore in the Kisite-Mpunguti Marine National Park and Reserve in Kwale County on Kenya's south coast. The park is renowned for its coral reefs and diverse marine life, making it a popular destination for snorkeling, diving, and dolphin watching. It is also Kenya's largest marine protected area, under the Kenya Wildlife Service.

The park's ecosystem is ocean waters and unique habitats such as mangroves, seagrass meadows, and coral reefs

that serve as a haven for a wide range of species of conservation concern. The park is home to resident and foraging populations of dolphins, considered flagship species that play a crucial role as indicators of the overall health of the ecosystem. It is a critical habitat for globally threatened species including dugong, sea turtles, sperm whales and whale sharks.

Kisite Island itself is small, flat-topped, and surrounded by corals. It is a remote breeding site for the beautiful Roseate Terns and sometimes

other marine terns such as Sooty Terns.

Despite being a valuable natural asset, cherished for its ecological significance and biodiversity, the marine park faces a number of threats. These include pollution from land-based sources, such as plastic debris, and infrastructure projects on the Wasini Channel which degrade the water quality, harm marine life and disrupt the migratory corridors of marine megafauna. Climate change also affects the coral and the species they support. Limited public awareness and understanding of marine conservation issues poses a danger to the park. There are limited resources, both financial and human, which constrain the ability to enforce regulations, conduct research, and implement conservation measures effectively.

Kisite-Mpunguti Marine Park and Reserve received the prestigious gold level Blue Park Award in 2021 for meeting the highest science-based standards in marine life protection and management. Blue Park Awards were created by the Marine Conservation Institute to promote the establishment of exceptional marine protected areas that effectively preserve marine wildlife, protect vital habitats, enhance resilience, and safeguard the breathtaking beauty of our oceans for future generations. 🌊

For updates visit
www.naturekenya.org

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Dudu Delights: Exploring the world of insects and other invertebrates at the Nairobi National Museum

By Benard Koros

On May 4th, the Nairobi National Museum grounds were the venue for our first fascinating “Dudu Walk” led by the knowledgeable Laban Njoroge, head of the Invertebrates Section at the National Museums of Kenya. While the weather forced a shift from field exploration to indoor discovery, the day proved to be an informative and engaging adventure into the wonderful world of a *dudu* (Swahili for insect).

The highlight of the morning was a tour of the museum’s insect collection – the second-largest collection in Africa! The group was captivated by the meticulously preserved specimens, a testament to the museum’s dedication to collecting, identifying and preserving species.



Laban Njoroge, an expert in aquatic invertebrates, shed light on the crucial role dragonflies and damselflies play as indicators of healthy water systems. He also pointed out the concerning trend of some species facing local extinction due to water pollution, a fact supported by the museum’s dragonfly phenographs – a method for identifying subpopulations.

The day wasn’t just about serious science – there were fun facts aplenty! Did you know that the large Emperor Moths in the *Saturniidae* family sport circular marks on each of their hind wings that look like

planet Saturn’s rings, a clever defence mechanism against predators? Or that the vibrant carmine lipstick shade comes from the cochineal bug, whose distinct red colour can also be used as a food dye and microscopy stain?

Mr Njoroge even introduced us to a dangerous newcomer: the *Anopheles stephensi* mosquito, native to Asia. First spotted in Marsabit and now collected from Archer’s Post in northern Kenya, this urban vector of malaria is a cause for concern.

The group was treated to a rare glimpse of this mosquito through a microscope, learning about the features that distinguish it from our native species.

As the weather improved in the afternoon, participants got their hands dirty (literally!) with some citizen science. The task? Hand-picking the numerous African Giant Snails (*Lissachatina fulica*) from the museum gardens – a fun and slightly sticky experience! They can be dried and ground and used as a protein supplement in animal feed! The snail is native to East Africa (https://infonet-biovision.org/plant_pests/snails-giant-east-african-snail). It is considered a major agricultural pest, the most damaging land snail in the world.

Calling all insect enthusiasts! The next Dudu walk will be on July 27. 🐛

WATERBIRDS ARRIVAL



Lesser Flamingos at Lake Elmenteita. In June the flamingos arrived at the lake in spectacular numbers.

Photo by Aloise Garvey

INSECT COMMITTEE OF NATURE KENYA

DUDU WALK

SAT 27 JULY

10AM - 12.30PM

Join our Dudu Walk at the **Nairobi National Museum Grounds** and get to encounter, identify and learn more about insects!

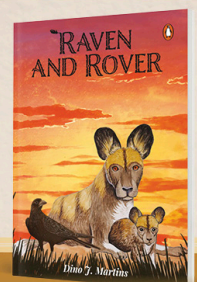
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Birding Updates

Wednesday Morning Bird walks in Nairobi.

3rd July – Museum Grounds/Michuki Memorial Park. Meet at 8 am in the open space in front of the entrance to the museum galleries.

10th July – Meet at 8:30 am at the junction of Magadi Road and Bogani East Road for a walk in Langata.

17th July – Ondiri Swamp. Meet at 8:30 am at the Ondiri Wetland Information Centre. Directions: Coming from the city centre, take Waiyaki Way towards Kikuyu. Turn left at Gitaru onto Southern Bypass. Slip left onto Kikuyu overpass. Take first left turn at overpass and drive straight to the Information Centre. Ondiri Swamp is the only quaking bog in Kenya, a presumed source of the Nairobi River. Thanks to Friends of Ondiri Wetland for welcoming the birdwalk.

24th July – Karen Blixen Museum. Meet at 8:30 am in the Karen Blixen Museum's Car Park area. Directions: Coming from the city centre, take Ngong Road towards Karen. Turn left at Shell Petrol Station onto Karen Road. The Museum is about 1.5Kms after Karen Country Club.

31st July – Paradise Lost. Meet at Paradise Lost Main Gate at 8:30 am. Directions: Take Kiambu Road. Turn Left at Paradise Lost junction in Thindigua after Runda Greens before Quick Mart Supermarket. Turn right at Kencom Apartments just after Kasarini Primary School. It's about 500m to the main gate. Thanks to the management for welcoming the birdwalk.

21st July. Sunday Birdwatch – Kapiti Plains. Meet at 8:30 am at the ILRI Kapiti Research Station Gate on Mombasa road. Directions: Coming from the city centre, take Mombasa Road. Pass the Makutano/Kyumvi junction to Machakos and continue towards Mombasa. After 9 km there is a green sign on left "Kapiti Plains". Turn right to the gate and barrier with the sign "ILRI Kapiti Research Station".

Matatus to Sultan Hamud and Emali will stop at "Kapiti stage". Better still is to hire a Machakos matatu for all those coming by public transport.

This is a day trip; bring a packed lunch and water. There are ticks on Kapiti Plains, but they are not known to carry diseases.

If you have questions, please write < news@naturekenya.org > or phone 0780-149200.

Bird Ringing at Nairobi National Museum grounds usually take place on Tuesday mornings. Please confirm with Titus Imboma <imbomati911@gmail.com> Phone 0721-649452.

Malindi Birding Updates

Please note time changes: Most Thursday bird walks meet at 7am. On 4th July, meet at 9 am. On 25th July, meet in the evening, 4 pm.

4th July – Malindi Museum Ground and Buntwani. Meet at Malindi Museum outside the Heritage Complex near the Nature Kenya Membership Office at **9.00 am**. (Feel free to come 30 minutes earlier to tour the Museum and enjoy the temporary exhibition together with cultural display of the Mijikenda, Swahili and Taita community in an 1890s building once known as kwa Balozi).

11th July – Malindi Airport. Meet at 7:00 am at Malindi Airport – at the Cafeteria after the main gate. Our host will meet us there. Thanks to the Kenya Airports Authority ground control department for welcoming the bird watch. We will help to monitor birds through citizen science. Kindly send your **ID or passport number** to our email <malindimembers@naturekenya.org> **before 9th July** and bring it with you on the bird walk day.

18th July – Mtangani via Afya Hospital. Meet at **7:00 am** at the Afya Hospital near the entrance gate. Directions: Drive to Lamu road then branch towards the Red Cross offices. Continue straight up the murrum road until you get to an iron sheet shade for local bikes on your left. Best way is to take a boda boda from Malindi town.

25th July – Sabaki River Bridge – Meet at **4:00 pm** at Malindi Museum outside the Heritage Complex near the Nature Kenya Membership Office. The fare to Sabaki River Bridge will cost between Ksh 100–150.

27th July. Saturday Birdwatch – Lake Jilore. Meet at **6:10 am** at **Gede stage** on the Malindi-Mombasa Road. We can offer space for 6 people only. To book a place, reach out to us **before July 22nd**.

For those with transport, Lake Jilore is located north-west of Arabuko Sokoke Forest via Tsavo East tarmac road to Sala Gate. Drive past Kakuyuni market and Jilore market. Turn left onto the red soil murrum track with Araucaria columnaris plantation. Meet at the village on the right after the plantation at **7:30 am**.

It will be a half day trip, bring drinking water and snacks.

For more information, email: <malindimembers@naturekenya.org > or **phone 0725 223042**

Mombasa Birdwalks by Friends of Fort Jesus are held the 3rd Saturday. To check meeting time and place, check Facebook page:

<<https://www.facebook.com/groups/FFJmombasa/>> or contact: Taibali Hamzali <thamzali@gmail.com> / 0733-980540 or Kelvin Mazera <klvnrua@yahoo.com> / 0720-928783



Tree Walk By Nature Kenya Plants Committee

Venue:
National Museums of Kenya
Meet at Nairobi Museum main gate

Date: Friday 26th July

Time: 9:00 AM

**Contact: 0780 149200
or 0726 006283**

Calling Nature Kenya members to join Friends of Nairobi Arboretum (FONA)

To revive FONA's role in support of the Nairobi Arboretum, we call on all interested Nature Kenya members to join FONA and take part in the meeting below: Members wishing to be part of FONA are invited to a virtual meeting on July 25, 2024 from 2:30 pm. To register for the meeting, please use the link below:

<https://bit.ly/4eKGzWC>

After registering, you will receive a confirmation email with information on how to join the meeting.

Yes! Start my NatureKenya membership

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For details on associated groups such as Youth Committee, Succulenta, Mammal Committee and Friends of Nairobi Arboretum or City Park, contact office@naturekenya.org