

# nature net

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February 2021



**Godhana Chalalu Dhadho, a rice farmer from Ozi, Tana River Delta.** PHOTO: GEORGE ODERA

## Promoting sustainable livelihoods to conserve the Tana River Delta

BY CAROLINE CHEBET

The lush, green fields make it difficult to imagine the calamities that Idsowe village within the vast Tana River Delta experiences whenever floods or drought strike.

The Tana River Delta is a land of alternating flood and drought. In the old days, people moved when disaster struck. This is no longer feasible. So today, farmers and pastoralists are adopting ambitious climate-smart agriculture projects geared towards improving livelihoods, resilience to climate change, and conserving the 130,000-hectare Tana River Delta.

Tana River Delta is one of the most important wetland ecosystems in East Africa. The Delta spreads out to cover parts of Tana River and Lamu counties, comprising of flood plains, riverine forests, mangrove systems, savannas, grasslands, lakes and pristine beaches, that form a network of natural and productive areas like Idsowe.

With over 350 species of birds, including globally important large flocks or "congregations", Tana River

Delta is a Key Biodiversity Area and a Ramsar site (wetland of international importance). Tana River Delta is also home to two globally endangered monkeys: the Tana River Red Colobus and the Tana River Crested Mangabey.

When undisturbed, the Delta acts like a sponge, absorbing floods, storing water, something that makes it lush and green even during the dry season. Today, with climate change increasing the severity of droughts and floods, and people unable to move elsewhere, Tana Delta is experiencing challenges. This is the reason why ambitious initiatives like chilli farming, bee-keeping, fish ponds and mainstreaming of climate-smart agriculture in production systems are taking root under the REBUILD project.

The project seeks to contribute towards increased resilience of communities in arid and semi-arid land (ASAL) areas of Kenya to drought and other effects of climate change. This is done through enhancing food and nutrition security of vulnerable households,

especially for women and children, generating sustainable livelihoods and protecting productive assets in Tana River County. Funded by the European Union (EU), the REBUILD project is implemented by CISP in collaboration with Nature Kenya, the National Drought Management Authority, GROOTS and Procasur.

"Part of solving the problems the Delta residents are facing is mainstreaming climate-smart agriculture. Farmers can choose crops that withstand the changing climate to boost their production. Livestock farmers can choose the right breeds to boost productivity while minimizing the negative impact on the environment," says Nature Kenya Executive Director Dr Paul Matiku.

"For the first time, our group comprising of 133 members tried out chilli farming after Nature Kenya provided us with the seeds," says Milcah Amaro, the chairperson of Harakisa group. "Thirty-five active members planted chilli in quarter-acre plots on their farms in July 2019. By December that year, the crop was ready for the market. In a good month, one can make between Ksh 12,000 to 15,000."

Despite frequent floods that have been ravaging the delta and flooding farms, Harakisa Group members continue to prepare parcels of land away from the previous fields for chilli farming.

"Previously, we used to farm crops like maize, but the production kept dwindling. Coupled with frequent floods and droughts, it became difficult to cope until chilli farming came along. This has since reduced dependency on forest products, especially trees, where some people had resorted to cutting trees and burning charcoal to earn a living," says Dorcas Helbon, a chilli farmer.

Ismael Komoro from Handaraku says the introduction of the Galla goat breed is a step towards improving productivity for goat farmers. Nature

Kenya has distributed 180 male Galla goats.

"Unlike the breed we have, Galla goats are big, meaning a farmer can get more profit by keeping a few goats of this breed," Komoro says. Having fewer but more productive goats also means less pressure on the Delta, hence less degradation.

Residents on the lower side of the Tana Delta, in Ozi and Mpeketoni villages, are conserving mangroves and dryland forests as they engage in rice and fish farming. The fish farming project is supporting fourteen fish ponds in Ozi.

"Fish farming in Ozi will solve challenges of overfishing within the mangroves, which are fish breeding zones," says George Odera, Nature Kenya's Tana Delta project manager. "A lot of fishing has been going on in the mangrove areas as most local fishers cannot access the deep sea due to lack of proper gear. Fish farming in ponds will give a lifeline to these communities while also conserving the critical mangrove forests and breeding zones."

"Nature Kenya previously supported us with fingerlings to restock our six ponds. The Department of Fisheries stepped in to train us on how to make feeds. Fishing is now manageable for the 50 farmers under this group. In July we harvested 2,400 kilograms of fish which we sold for Ksh. 200 a kilo, translating to Ksh. 480,000," says Abdallah Hassan Mohammed, the secretary of Moto Fish farmers in Ozi.

For farmers in the Delta, getting certified seeds has been one of their biggest challenges. Nature Kenya has stepped in to distribute certified seeds and incorporated extension officers who visit farmers to enhance mainstreaming of climate-smart agriculture in production systems.

Rice farming within Ozi and Mpeketoni villages received a boost

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**LUNGS FOR KENYA**  
**11TH CHARITY GOLF TOURNAMENT**  
 DATE: 26<sup>TH</sup> MARCH 2021 | VENUE: KAREN COUNTRY CLUB | TIME: 8:30AM  
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## Letter to Members February 2021

Members, we share your anxiety during a year of pandemic, and hope you have remained safe, well and cheerful. While much of the world struggled with a third wave of Covid-19, the curve in Kenya flattened in January. We are however warned to continue wearing masks, washing hands and working from home when we can, as the third wave may catch up with us. Protective vaccines are expected in the next few weeks, but it will take months to reach everyone.

Meanwhile, Nature Kenya's conservation work continues, on the ground and in policy and advocacy.

February 2021:

1. Wednesday Morning Birdwalks are expected to resume on February 3.
2. For the month of February, bird walks will take place at the Museum Grounds. No loaning of binoculars, no sharing of binoculars and guidebooks and no pooled transport. Please do not ask for lifts. Masks are a must and you may carry your own sanitizer.
3. The Nature Kenya office is closed. However, membership can be renewed online <http://naturekenya.org/support/membership/> or via M-pesa. Books, honey, etc. may be purchased online or with M-pesa and collected on Mondays or by arrangement. Ring the bell at the entrance of the office behind the galleries.
4. Members will continue to receive an electronic version of the Nature Net
5. Sunday bird walks, field trips and in-person talks remain suspended until further notice. Virtual talks through zoom may be announced by e-mail.
6. The 'Lungs for Kenya' Charity Golf Tournament is on Friday 26th March 2021 at the Karen Country Club. Book your slot to participate by contacting Gloria Waswa, Membership and Marketing Manager at [nkmembership@naturekenya.org](mailto:nkmembership@naturekenya.org) or telephone 0726 134029.
7. The EANHS/NMK Library is open. Museum galleries and sites are open to the public under Ministry of Health guidelines (as at end January 2021).

Please support us as we work towards a greener future!

For clarifications or to report your observations on species and sites, kindly contact us through email: [office@naturekenya.org](mailto:office@naturekenya.org) or telephone: 020 3537568, 0780 149200, 0751 624312, 0771 343138

**Dr. Paul Matiku,**

Executive Director, Nature Kenya – the East Africa Natural History Society

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after 247 farmers received 4,720 kilogrammes of rice seed. Farmers expect to boost their production while conserving the critical mangrove and dryland forests.

"Although we are yet to harvest, we can see the difference of the certified seeds distributed by Nature Kenya from the ones we normally plant. They are also fast-maturing," says Godhana Chalalu Dhadho, a rice seed beneficiary.

Mary Mwendu, a beneficiary of climate-smart agriculture training, says the introduction of certified maize seeds in Hurara in Tana Delta has boosted productivity within the area.

"Initially, we thought it was cheaper getting seeds from the old harvest, a situation which resulted in poor production. The latest harvest from the distribution of certified seeds yielded double of what we used to harvest. From the initial three bags we used to harvest from an acre, we currently harvest between 8 to 10 bags," Mwendu says.

Farmer field schools have also been set up, with one being at Minjila near Garsen to enhance mainstreaming of climate-smart agriculture. Farmers can walk in and learn best farming practices to adapt to the changing climate.

Nature Kenya is also implementing another project in Tana River Delta: The Restoration Initiative (TRI) Tana Delta. This project, funded by the Global Environment Facility (GEF) through the United Nations Environment Programme (UNEP), aims at restoring degraded forest landscapes in Tana River and Lamu counties. 🌳

## Invasive *Prosopis* trapping flamingos at Lake Bogoria

BY CAROLINE CHEBET

Pink spots across the blue-green water; the low grunting sound of thousands of feeding flamingos in the distance – Lake Bogoria's alkaline water creates a haven for almost a quarter of the world's Lesser Flamingos after their breeding season in Tanzania's Lake Natron.

This year, however, as one nears the shore the scene changes – dozens of flamingo carcasses dangle from the branches of dense *Prosopis juliflora* thickets that blanket the lake's shores. Some flamingo seem to have lost the fight after struggling to disentangle from the sharp thorns of the low trees.

"It is worrying," says James Kimaru, the Kenya Wildlife Service (KWS) senior warden at Lake Bogoria National Reserve. "Tens of flamingos are dying from being trapped by *Prosopis* bushes while attempting to either land or take off."

*Prosopis juliflora*, a kind of mesquite, is an aggressive invader that replaces native vegetation, especially in dry areas where there is seasonal flooding. It is ranked among top 100 invasive species globally, ravaging other arid and semi-arid areas of Ethiopia, Sudan, Egypt, West Africa, Australia, and other countries.

The plant was introduced in Kenya in the 1970s to rehabilitate the Arid and Semi-Arid Areas (ASALs), due to its resilience, fast growth rate and edible pods. Here it became known as 'Mathenge'.

*Prosopis* does not normally grow on the shores of strongly alkaline or saline lakes, and flamingos can use the muddy shores dusted with white soda ash for takeoff and landing. In the past decade of heavy rain and catchment degradation, however, many alkaline lakes have flooded and become fresher. *Prosopis* became established in the shallow, relatively fresh water along the edges of the lakes.

"Flamingos prefers shallow water near the shores, which unfortunately has been taken over by *Prosopis*. This becomes a challenge whenever the birds are landing or taking off," Richard Kipng'eno, Birding and Membership officer at Nature Kenya says.

Lake Bogoria has expanded by 7 square kilometre from its original size. The rising water levels have submerged administration offices and the gate of the national reserve.

"*Prosopis* has also created navigational challenges in some parts of Lake Baringo," Kipng'eno adds. "During the recent waterbird counts at Lake Baringo, we experienced some difficulties in manoeuvring boats through the *Prosopis* thickets."

Large concentrations of *Prosopis* are to be found in Tana River, Turkana and Baringo counties. The invasive *Prosopis* has also colonised parts of Taita Taveta, Malindi, Samburu, Isiolo, Mandera, Marsabit, Wajir, Kajiado and Migori counties.

The plant has also been documented to have invaded some of Kenya's important wetlands including River Tana Delta in Tana River County, Lorian Swamp (Isiolo/Garissa Counties) Lengurruahanga swamp (Kajiado) among others.

*Prosopis* charcoal is highly rated, but it is very difficult to cut the hard wood of the spreading, thorny trees. 🪚

For updates visit

[www.naturekenya.org](http://www.naturekenya.org)

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Lesser Flamingos in one of the oxygenation ponds at the Nakuru Sewerage Treatment Plant. PHOTO: TITUS IMBOMA

## Lesser Flamingos turning up in unexpected places, including sewage treatment plants

BY TITUS IMBOMA AND FLEUR NG'WENO

Water levels continue to rise in the Rift Valley lakes. As a result, the alkalinity of some of the lakes is dropping. Changes in the lakes' chemistry are causing a shift in the ecology of alkaline lakes, whose pH levels have decreased. The adjacent terrestrial habitats have also been affected, with large portions submerged in water. This impacts the carrying capacity for larger mammals in small, fenced protected areas like Lake Nakuru National Park.

Birds are key indicator species of changes in the environment. During the January waterbird census, large flocks of flamingos were observed at the oxygenation ponds in Nakuru, and a smaller flock at the Dandora sewage treatment plant in Ruai, Nairobi. This suggests that flamingos are seeking alternative habitats because of reduced food supply in the alkaline lakes.

At the Nakuru Sewage Treatment plant sitting adjacent to Lake Nakuru, more Lesser Flamingos were observed than on Lake Nakuru itself. Out of the total 6,000 Lesser Flamingos counted on both the ponds and the lake, 4,000 birds

were recorded at the sewage treatment ponds. The Dandora treatment ponds recorded 40 Lesser Flamingos.

Waste stabilization ponds are well-suited for the tropics thanks to the high intensity of the sunlight and high temperatures which are important in the wastewater treatment processes. If other counties work towards achieving efficient wastewater treatment processes, especially for the urban centres, there could be alternative feeding habitat for Lesser Flamingos in times of crisis.

During January, Lesser Flamingos have also been reported on Lake Ol' Bolossat – a freshwater lake in Nyandarua County – in Amboseli National Park, on Athi Dam in Nairobi National Park, and on Lake Simbi Nyaima, Nyangweso Irrigation scheme and Ondago swamp in Homa Bay county.

The Waterbird census should be conducted consistently at traditional counting sites and observers should report opportunistic feeding areas for Lesser Flamingos in the country.

## Glorious February skies

BY FLEUR NG'WENO

In the evening, look east, with your back to the sunset. Sirius, the brightest star of the night, is in the southeast. (The sun is of course our brightest star). The second brightest star, Canopus, is to the right of Sirius, in the southern sky. Further west, low in the southwest, is the bright star Achernar.

The constellation Orion, the Hunter or Warrior of Greek myths, is high in the east, almost overhead, above and left of Sirius. Look for three bright stars in a row. To the ancient Greeks, this was Orion's belt. They saw the three fainter stars in a row, at a right angle to his belt, as his sword. Four bright stars represent Orion's shoulders and knees. The star Rigel, blue-green in colour, is one knee. The orange star Betelgeuse is one shoulder, on the other side of the 3-star belt.

The ancient Greeks imagined two dogs following the Hunter – Sirius and Procyon. Procyon is a bright star east of Orion, left of Sirius.

To the north (left) of Orion, the reddish star Aldebaran is at one end of a cone-shaped group of stars, the Hyades cluster. A larger cluster of stars, further north, is the Pleiades or Seven Sisters. The waxing moon is near the Pleiades on February 19, near Aldebaran on the 20th.

With binoculars, you can see the great nebula M42 in Orion's sword, and the glow around the stars of the Seven Sisters and Hyades

cluster. In a dark location away from urban lights, you can look for the faint star cluster M41 near bright Sirius.

Lower in the northern sky, five bright stars form a giant pentagon. This is the constellation of Auriga, the Charioteer of the ancient Greeks. The brightest of the five is the star Capella – which is actually two stars that appear to us as one. Between Auriga and the star Procyon is the long, narrow constellation of Gemini, the Twins.

Sirius, Canopus, Rigel, Capella, Procyon, Achernar and Betelgeuse are among the ten brightest stars in the night sky.

### Planets, Feb '21

Mars, fading now, is high above at dawn. The waxing moon is near Mars on Feb 18-19. At the end of the month, Mars appears close to the Pleiades star cluster. They will seem even closer in March.

The rest of the planet action is low in the east before dawn: brilliant Venus sinks into the sunrise, while Saturn, then Jupiter, then Mercury appear and rise. Saturn, rather faint, passes Venus on February 6, Jupiter passes Venus on the 11th, and tiny Mercury rises quickly.

### Moon, Feb 2021

Feb 4 – last quarter. Feb 11 – new moon. On February 12, the Lunar New Year will be celebrated in many countries in Asia. In the Chinese calendar, it will be the year of the Ox. Feb 19 – first quarter. Feb 27 – full moon. 🌕

## VIRTUAL PUBLIC TALK

### The Water Measurers: Macro Invertebrates and Bio Indication of Water Health

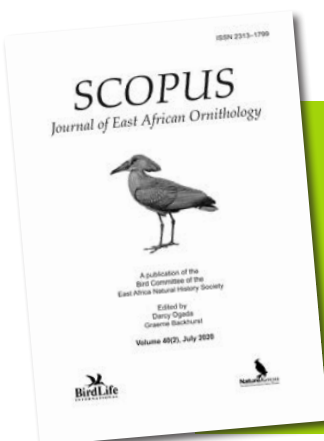
By: Dr. Laban Njoroge | Date: 12th Feb | Time : 2:00 - 3.30 pm

The talk will be via Zoom  
Meeting ID: 934 2081 2657  
Passcode: 354336

## NEW PUBLICATIONS

The latest issue of *Scopus* was published in mid-January and contains some important papers. Download the issue to find out more about the rediscovered Ruvu Weaver, how many Crowned Cranes make up the important population at Lake Ol' Bolossat, which subspecies of the Green-capped Eremomela has been added to the East Africa list and more. Now is a good time to write up your research and send it to the editor for the next issue in July!

The newly published "Checklist of the Spiders (Araneae) of Kenya" by Grace M. Kioko, Yuri M. Marusik, Shuqiang Li, Esther N. Kioko and Liqiang Ji is out. You can access it through the journal 'African Invertebrates': <https://africaninvertebrates.pensoft.net/article/58776/>



## Birding Updates

**Wednesday Morning Birdwalks** are starting up again, led by Richard Kipng'eno and Peter Muriithi. In February, the walks will take place at the Nairobi National Museum grounds. Meet at 8 am in the plaza in front of the entrance to the museum galleries. Please observe Covid-19 protocols: No sharing of binoculars and guidebooks and no pooled transport. Masks are a must and you may carry your own sanitizer.

Other Nature Kenya field trips remain suspended.

**Bird ringing at Nairobi National Museum** grounds is ongoing.

Ringling (bird banding) is carried out weekly on Tuesdays from 7:30-10:30 in the morning, organized by Titus Imboma. Ringers and those who want to observe and learn meet at Nairobi National Museums at the Peace Park near the Botanical Gardens. Migratory birds such as Common Blackcap, Marsh Warbler, Willow Warbler and Garden Warbler may be ringed. Ringers are requested observe Covid-19 protocols. It is advisable to confirm on Monday as plans can change: <Imbomati911@gmail.com> Phone: 0721-649452.

### January 2021 Waterbird Counts on the Rift Valley lakes and central Kenya:

Counts on lakes Bogoria, Baringo, Nakuru and Elmenteita successfully concluded.

Lake Ol'Bolossat, February 6-7. If you would like to take part, and you are experienced in identifying and counting waterbirds and can meet the group at the lakes, please contact Ireene Madindou at <ilhanmadindou@gmail.com> or phone 0725 632 607.

Nairobi-area counts were done on a self-help basis. Thanks to all participants!

Regarding Coast counts, please contact Lennox Kirao <lennoxk9@gmail.com>

**Mombasa Birdwalks** are held the 3rd Saturday of each month. To check meeting time and place, check Facebook page: <https://www.facebook.com/groups/FFJmombasa/>

Or contact:

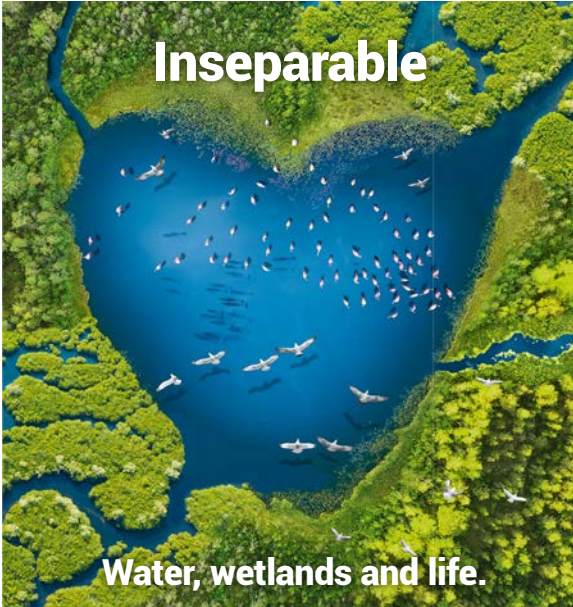
Taibali Hamzali <thamzali@gmail.com> / 0733-980540 or Kelvin Mazera <klvnrua@yahoo.com> / 0720-928783

Stay updated with the birding scene in Kenya! Sign in to the new Kenyabirdsnet platform on Google Groups at: <https://groups.google.com/d/forum/kenyabirdsnet>

Please send your records to:

**Kenya Bird Map** <http://kenya.birdmap.africa/>

If you have questions re KBM, write to <kenyabirdmap@naturekenya.org>



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