



Raising butterflies to conserve forests



PHOTO BY JOHN MWACHARO

Charles Mombo, a member of Chawia Youth Group, displaying some of the butterfly pupae.

BY JOHN MWACHARO

Butterflies are some of the most beautiful insects on earth. Fluttering their coloured and patterned wings, these charming creatures arouse awe and a sense of harmony wherever they fly. The Taita Hills forests are home to many of these flying beauties. As a matter of fact, there are three butterfly species that are endemic to these forests – found nowhere else on Earth.

Chawia forest is among the three remaining large forest fragments in the Taita Hills. At the fringe of this forest, a group of youth is engaged in butterfly farming, proving that there's a financial stake in keeping the forest intact. Comprising of 14 members, the Chawia Youth Group rears and sells butterfly pupae as one of its core livelihood activities. What sets this group apart from others is its determination to keep Chawia forest conserved by encouraging the planting of indigenous trees.

"This forest is very important to us because the butterfly species found here are dependent on it and its indigenous trees," explains Amos Mwamburi, a member of the group.

The group considers conservation of Chawia forest a priority as it is directly linked to their livelihoods. The group has a tree nursery with over 4,000 seedlings, mostly indigenous ones. This year they are planning to plant 1,000 trees as part of their forest restoration initiative. The trees intended for planting are those mostly preferred

by butterflies. In addition, each member of group has planted trees in their farms.

To raise butterflies, they start with butterfly eggs, which hatch into tiny caterpillars. The caterpillars feed on the leaves of certain forest trees. They grow and grow. When they are big enough, the caterpillars turn into pupae. Inside the pupa, the caterpillar transforms into a butterfly. After a few days or weeks, the adult butterfly will hatch from the pupa.

More than 25 types of butterflies inhabit Chawia forest, including *Cymothoe teita* and *Papilio desmondi teita*, a subspecies of Desmond's Green-banded Swallowtail. These two butterflies are endemic to Taita Hills forests. Some species of swallowtails and pansies can also be found in Chawia forest.

According to Mwamburi, on average the group sells around 200 butterfly pupae per month, translating to Ksh.11,000. The pupae are either sold to Kipepeo Centre in Gede near Malindi or to brokers, depending on the butterfly type. The pupae are in turn exported abroad for live exhibits. Kenya has over 800 butterfly species and is ranked among the world's leading producers of pupae.

"One good thing about butterflies is that they lay many eggs. A single butterfly can lay up to 150-200 eggs, and if these manage to reach the pupae stage, we are talking of over 100 pupae from just one butterfly," says Mwamburi.

Although the group's members rear two of the Taita endemic butterflies, Mwamburi is quick to point out that they do not sell their pupae.

"We do not sell the *Papilio desmondi teita* and *Cymothoe teita* pupae. We release adults of these two butterfly subspecies into the wild to increase their numbers," he says.

Butterfly farming has enabled Mwamburi and his colleagues to not only earn a livelihood but also to actively advocate for conservation of Chawia forest.

"We carry out awareness activities around here, where we encourage community members to plant indigenous trees in their farms. People are now beginning to appreciate the importance of conserving our forests which also serve as sources of water. We stand to lose a lot if these forests are destroyed," he adds.

Like the other surviving indigenous cloud forests of Taita Hills, Chawia has suffered substantial vegetation loss and degradation over the years. Currently, only about 86 ha of the original Chawia forest remains.

The Taita Hills comprise two main mountain massifs, Mbololo and Dawida, rising from the dryland below. The forests that remain on the hilltops are extensively fragmented. Taita Hills forests are

part of the Eastern Arc, one of 34 global biodiversity hotspots, and are ranked as one of Kenya's Key Biodiversity Areas (KBAs). Two Critically Endangered birds are only found in these forest remnants: Taita Thrush (*Turdus helleri*) and Taita Apalis (*Apalis (thoracica) fuscigularis*). Severe fragmentation, isolation and decline in quality and extent of indigenous forest cover in Taita Hills pose major threats which affect the breeding success and survival of the two bird species. Helping the community to conserve the forests is therefore vitally important.

Nature Kenya, under the 'People Partner with Nature' program, has been supporting communities living adjacent to the Taita Hills forests to engage in income generating activities, such as butterfly farming, beekeeping, eco-tourism, among others, that reduce pressure on the environment. The program is being implemented in partnership with DOF (BirdLife in Denmark) with financial support from DANIDA/CISU. The overall objective of the program is to 'reduce the destruction of forested KBAs and contribute to the realization of best participatory forest management practices for the benefit of all.' This program is also running in Arabuko-Sokoke Forest and Dakatcha Woodland in Kilifi county. 🌿

109TH ANNUAL GENERAL MEETING OF THE EAST AFRICA NATURAL HISTORY SOCIETY

VENUE

Louis Leakey Hall, Nairobi Museum

DATE

Wednesday 8th May 2019

TIME

12:00 - 2:00pm

AGENDA & PROGRAM

12:00pm Coffee/tea and quick lunch

1:00pm Convene in hall

- Minutes of the 108th AGM
- Matters arising from the Minutes
- Chairman's Report
- Honorary Treasurer's Report
- Appointment of Auditor
- Library, Journal, Committees and Projects Report
- Any other business of which due notice in the form of the Resolution to be proposed has been given to the Honorary Secretary, signed by not less than 2 members, not less than 21 days before the date of the meeting
- Election of Office Bearers, Members of the Executive Committee, and Trustees

Nomination forms for office bearers or Executive Committee members may be collected from the office or requested by e-mail.



Conservation of African vultures takes center stage at global bird race

The spectacular 'Champions of the Flyway' global bird race will take place in Israel this month. For the first time ever, Kenya will be participating in the race with a team comprising of three Nature Kenya and three NABU (Nature and Biodiversity Conservation Union, BirdLife in Germany) staff. Conservation of African vultures is this year's race focus, with proceeds raised from the event earmarked for this cause.

A project in Africa, Kenya to be precise, has been chosen as the beneficiary of funds raised by the event. The project – 'Preventing Poisoning to Save Africa's Vultures' – is currently running in Maasai Mara, Narok County. Under this project, Nature Kenya, the Peregrine Fund, BirdLife International and the Kenya Birds of Prey Trust are involved in several initiatives aimed at reducing poisoning-related wildlife deaths. Teams signed up for the race are also independently raising funds to help tackle the rapid and catastrophic decline of African vultures.

'Champions of the Flyway' is an annual event organized by the Society for the Protection of Nature in Israel (BirdLife in Israel) in partnership with BirdLife International. This year, seventeen teams of birders from across the globe will converge at Eilat, southern Israel, from 20th March to compete in a 24-hour race to identify bird species at a designated area (the whole of southern Israel). The race will take place on 26th March with the team identifying the most bird species being crowned the 2019 'Champions of the Flyway'.

Nature Kenya's Paul Gacheru, Rebecca Ikachoi and James Mutunga will be joining forces with NABU's Dirk Wegener, Thomas Tennhardt and Werner Schroeder under team 'Zeiss Vultures Unlimited'. The team is raising funds to support community awareness on the negative impacts of wildlife poisoning, create local community champions for vulture conservation and train KWS rangers and community members on rapid response to wildlife poisoning incidents in the Maasai Mara area. They will be battling it out

This is a major boost to our work of reaching out to more communities and enhancing emergency wildlife poisoning response efforts.

Rebecca Ikachoi

with teams of birders from the United Kingdom (UK), the United States (US), Holland (the Netherlands), Italy, Canada, South Africa, Switzerland and Israel. The 'Champions of the Flyway' race is a culmination of an intensive fundraising exercise for the benefit of birds. Every year a conservation cause is chosen, in collaboration with BirdLife International, and all participating teams raise money and awareness for the chosen cause. The campaign has raised over \$350,000 for bird conservation projects in Georgia, Greece, Cyprus, Malta, Turkey, Serbia and Croatia.

The 24-hour bird-spotting race also generates great drama and excitement and reaches out to a huge international audience with over one million people being exposed to the project annually via social media platforms.

'Champions of the Flyway' is the brainchild of the Israel Ornithological Center of the Society for the Protection of Nature in Israel. Having an exciting bird race at the peak of migration to catch the attention of birders was the idea behind the event. 🦅

Grey crowned crane census to be conducted

Kenya loses at least 800 grey crowned cranes yearly, scientists have warned. Raising the alarm, the scientists added that the bird is facing extinction. They were speaking before the launch of a nationwide survey for the bird.

"The species is in trouble. Its future is fading fast," said Wanyoike Wamiti a scientist from the National Museums of Kenya (NMK).

The National Museums of Kenya, the Nature and Biodiversity Conservation Union - Germany (NABU) and other partners will conduct the survey. Forty volunteers forming at least nine teams drawn from Kenya, Germany, UK, France, Rwanda and Tanzania are to take part.

The environmentalists attributed the decline on habitat loss and illegal collection of the birds' eggs. In 1986, there were 35,000 of the species. The number reduced to 12,500 in 2015. A partial survey last year showed the birds were endangered. There were only less than 10,000.

"The population has declined by 80 per cent in a period of 40-50 years," Dr. Peter Njoroge said. He is a senior scientist at NMK.

Dr. Njoroge said the census set to run until March 8 will be critical in coming up with an action plan to save the birds.

The grey crowned crane is one of the 15 living species of the cranes in the world. It is currently listed as endangered by the International Union for Conservation of Nature (IUCN).

Kenya Wildlife Service (KWS) head of research and multilateral agreements Solomon Kyalo said Kenya, as a signatory to treaties and conventions, is required to cooperate with other countries to protect the birds.

"KWS is obligated to prepare status of wildlife and present the report to the Cabinet secretary before being tabled in the National Assembly," he said.

Kyalo said the report will help the country to intensify conservation efforts. After the census, figures will be consolidated with those KWS has in its database. Scientists say invasive plant species ruin the bird's nesting places.

Nature Kenya's communications and advocacy manager Serah Munguti said the data will be used in policymaking. 🦅



PHOTO BY PETER USHER

A Grey crowned crane with its chick.

Your support counts!

African vultures are under serious threat of extinction. These majestic birds that act as nature's "clean-up crew" need your support to remain in the skies. You can participate in this cause to save African vultures by supporting team 'Zeiss Vultures Unlimited' achieve its fundraising target. To find out more or make a donation kindly type this link on your web browser: <http://bit.ly/2D9Wool> and hit the enter key.

You can also visit the 'Zeiss Vultures Unlimited' official webpage <http://www.champions-of-the-flyway.com/vulturesunlimited/> or check out the 'Champions of the Flyway' film <https://youtu.be/fFdUXCh1zGo> to get a real feel of the event.

For updates visit www.naturekenya.org

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PHOTOS BY JOHN MWACHARO

Taita Apalis (top), a lovely looking beetle (below)

ANNOUNCEMENT

The second issue of Volume 107 (2018) of the *Journal of East African Natural History* was brought online in early 2019

The following papers are now available from African Journals Online <https://www.ajol.info/index.php/jeanh/issue/view/17766>

In memoriam: PATRICK NTHUSI MUTHOKA - 20 February 1962 – 14 February 2018

Geoffrey Mwachala, Itambo Malombe, Mathias Mbale
Journal of East African Natural History 107(2): 37–39 (2018)

Africa's forgotten forests: the conservation value of Kenya's Northern coastal forests for large mammals

Rajan Amin, Tim Wachter, Andrew E. Bowkett, Bernard Ogwoka, Mike Morris, Bernard R. Agwanda
Journal of East African Natural History 107(2): 41–61 (2018)

Book Review: Trees and Shrubs of Mozambique

Quentin Luke
Journal of East African Natural History 107(2): 63–66 (2018)

March 2019 Evening Sky

BY FLEUR NG'WENO

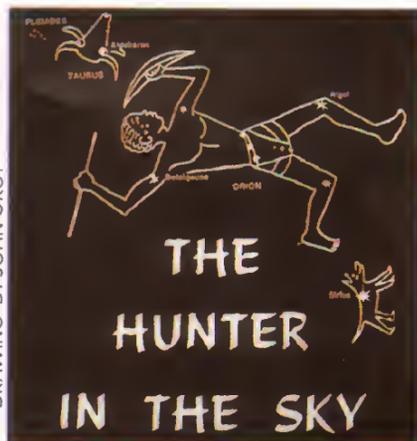
Look up when the sky has become dark, on an evening with few or no clouds: Sirius, the brightest star of the night sky, is high above, towards the south. Canopus, the second brightest star, is lower in the south.

DRAWING BY JOHN OKOT



Orion's stars.

The ancient Greeks also gave names to the patterns that the stars form in the sky, called constellations. Face south (towards Sirius) and look overhead. The constellation of Orion, the Hunter or Warrior, is striding across the sky, as the ancient Greeks saw him. They called the three stars in a row his belt, and the three fainter stars in a row his sword. Four stars around them are Orion's shoulders and knees. Blue-green Rigel towards the southwest is one knee, orange Betelgeuse towards the northeast is one shoulder.



DRAWING BY JOHN OKOT

Orion as a hunter.

The Hunter is followed by his hunting dogs: Sirius the Dog Star, and to the left (northeast) Procyon the little dog. You can imagine Sirius as the dog's eye, and the stars just below as forming his body, feet and tail.

Turn around to look north. The Pleiades and Hyades star clusters (See February Nature Net) are dipping towards the west. Further north is the pentagon-shaped constellation Auriga, with its bright star Capella. High in the north, between Procyon and Auriga, is the constellation Gemini – two sets of two stars. The crescent moon is near the planet Mars on March 11, near the Pleiades on the 12th, the Hyades on the 13th, and the star Pollux in Gemini on the 16th.

Now turn to look east, with your back to the sunset. The constellation Leo the Lion is high in the east. Imagine the bright star Regulus as the lion's heart; and the sickle-shaped line of stars next to it as the lion's head and mane. The waxing moon is near Regulus on March 18.

On a clear night away from city lights, you may see the Milky Way stretching like a pale ribbon across the sky, past Sirius, Orion, Gemini and Auriga. It is our galaxy, made up of millions of stars.

Morning Sky

After Orion has set in the west, the Scorpion rises in the southeast. The planet Jupiter is next to it. Alpha Centauri, third brightest star at night, is in the southwest. The moon is near Jupiter on March 27.

The brilliant planet Venus sinks towards the sunrise. The planet Saturn is above it. The waning crescent moon is near Saturn on March 2 and 29, and near Venus on March 3 and April 2.

Moon, March '19

March 6 – new moon; look for a slender crescent above the sunset on 7th. March 14 – first quarter; 'half' moon overhead at sunset. March 21 – full moon, rising in the east. March 28 – last quarter; 'half' moon overhead at dawn.

March sun

March 20 is the equinox – when day and night are of equal length, all over the world. ☀



2019 LUNGS FOR KENYA CHARITY GOLF TOURNAMENT Golf for Restoration of Mt Kenya forest

FRIDAY 29TH MARCH 2019 | KAREN COUNTRY CLUB | STARTING 8:00AM

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TO REGISTER CONTACT: 0739 200216 office@naturekenya.org

IN THE FIELD

MARCH 2019 AT A GLIMPSE

Mar 2 nd	FoCP Nature Walk
Mar 6 th	Morning Bird Walk
Mar 9 th	FoNA Tree Walk
Mar 13 th	Morning Bird Walk
Mar 16 th	FoCP Nature Walk
Mar 17 th	Sunday Bird Watch
Mar 20 th	Morning Bird Walk/Public Lecture
Mar 27 th	Morning Bird Walk
Mar 29 th	Charity Golf Day

Bird ringing every Tuesday morning (check with Ornithology section, National Museums).

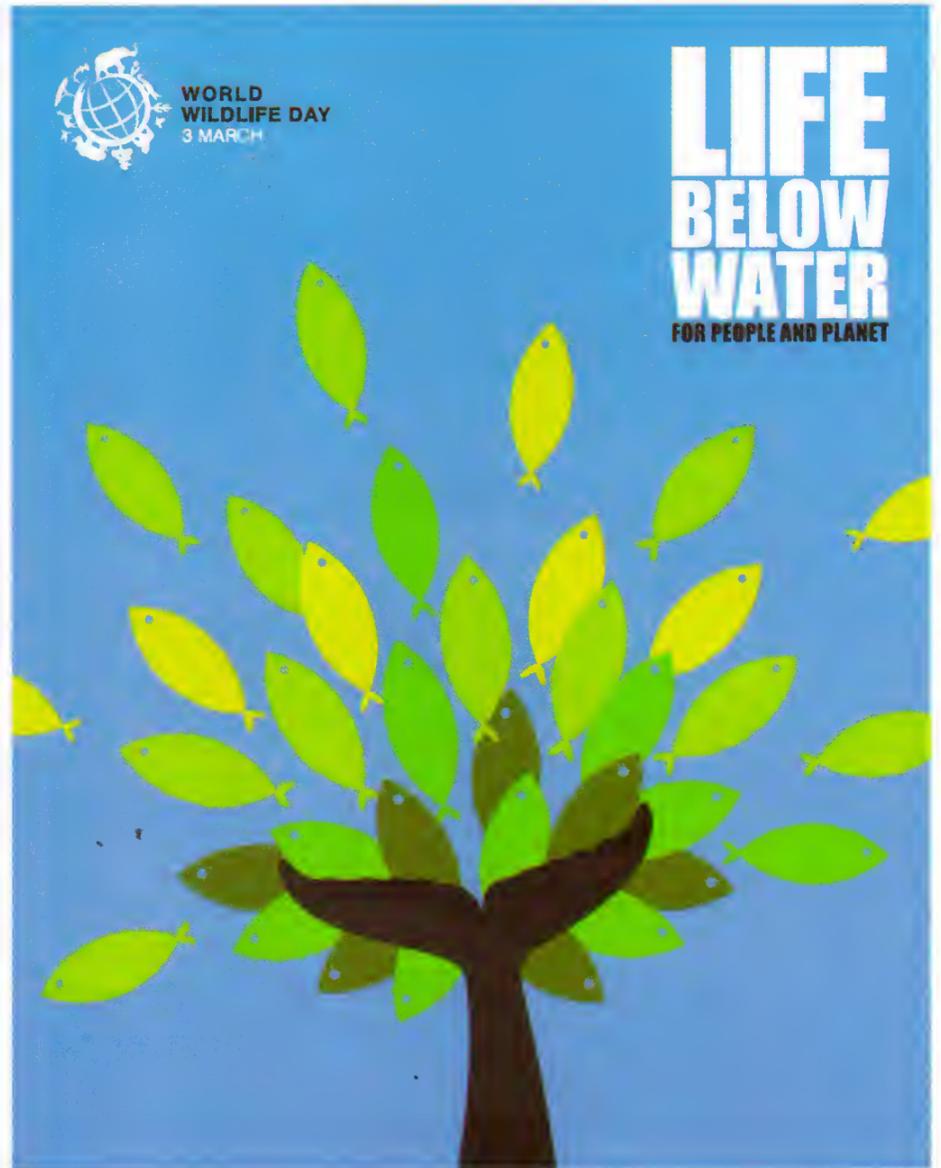
Birders Please Note! The Wednesday Morning Birdwalks meet at 8:30 am at the Nairobi National Museum. Transport is on a self-help basis. The group meets in the courtyard of the Nairobi National Museum, past the entrance to the galleries. We normally return at about 12:30 pm.

The Sunday Birdwatch on the THIRD Sunday of each month now also meets at 8:30 am, at the same location. It is a day trip; please bring water and lunch.

Mombasa Birdwalks On the 3rd Saturday of each month. For meeting time and place, please contact Taibali Hamzali <thamzali@gmail.com> / 0733-980540; or Doris Schaule <dorischauale@gmail.com> / 0722-277752. Or check Facebook page: <<https://www.facebook.com/groups/FFJmombasa/>>

Contact the office for information on other birdwalks in Kakamega, Kisumu, and other sites

Ngong Forest walks - 1st and 3rd Saturday at 9.00 am. Contact Simon 0729-840715



Oi Doinyo Orok Mountain Day Excursion

Date: 6th April 2019

Activities

- Hiking
- Wildlife & Bird Watching
- Sight seeing & Picturesque sceneries

Charges cover:

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- Conservancy fees

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Book & pay by 1st April 2019. Contact: 0739, 200 216 or news@naturekenya.org



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