WILDLIFEDIRECT

Newsletter
Issue #28
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WILDLIFE WARRIORS KIDS

Hello Wildlife Warriors!
Stay connected to nature even when you are at home.

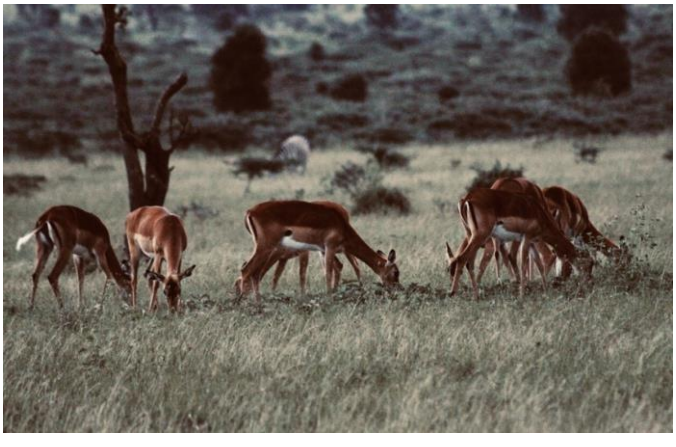
Welcome to the 28th issue as we explore the world of **Honeybees!** Did you know that without bees and other pollinators we would not have food? Most of the food that we eat are produced by plants that depend on bees for pollination.

We learn how we can take actions for nature, share amazing art done by other students, meet a Nature's Treasures Photo Competition junior entrant, wild jokes, and much, much more... **Please read on!**

Stay with us on this fun filled adventure and always remember to share with your family and friends.

JUNIOR PHOTOGRAPHER HIGHLIGHT

Antoine Iain Murenga participated in the Nature's Treasures Photo Competition. Here are some of the images that he submitted.



Q & A with Antoine Iain Murenga

Q. How old are you?

A. I am 16 years old.

Q. What do you like about nature photography?

A. I've always loved wildlife and also have a passion for photography and filmmaking.

Everything connected. My main career path doesn't lead to wildlife photography, however, I still love capturing photos of animals in their natural habitats.

Q. What advice do you have for young and upcoming photographers?

A. All photographers are haunted by the photos they didn't take. Don't live a life of regrets. When you have an idea, attack it with everything you've got.

BEES

VOCABULARY:

- **Pollination** – Transfer of pollen from one flower to the other.
- **Colony** – A group of bees living together in a hive.
- **Swarm** – A large group of bees flying together.

- Bees provide us with honey and are very fascinating than we can ever imagine.
- To have a healthy environment, we need bees.
- There are over 20,000 species of bees in the world, found in every continent except Antarctica.

HONEY BEES

- Honey bees are social insects that live in colonies.
- A honey bee colony is a family unit consisting of a single queen, hundreds of male drones, and thousands of female worker bees.

- A bee hive is like a busy city with up to 50,000 bees.

- Inside the hive, bees build six sided cells from wax that when packed together make a honeycomb.

- The honeycomb is used by the queen to lay eggs and also to store their food in form of honey.

BEEHIVE MEMBERS

1. THE QUEEN BEE

- The leader of the colony is called a queen.

- She is the largest bee with a longer abdomen and small wings
- She lays all the eggs which can reach up to 2000.
- There can only be one queen bee in a hive at a time.
- The queen does not leave the home unless the colony swarms to go to a new home.
- She can live for up to 7 years.
- When a colony needs a new queen, a healthy larva is chosen and fed royal jelly food to grow to a queen.

2. WORKERS

- Worker bees are female and the smallest honey bees.
- They do most of the work and have a stinger.
- They build and clean the hive; collect pollen and nectar; feed the queen, drones, and larvae.
- They have a longer proboscis (straw-like mouth) to extract nectar from inside the flower.

- They die immediately after stinging as the sting raptures. They have a lifespan of 45 days only.

3. DRONES

- Male bees are known as drones
- They do not have stingers and thus cannot sting.
- In a colony, several hundred drones live at a time.
- Their only job is to mate with unfertilized queens.

- If a drone gets an opportunity to mate, it dies immediately afterwards.
- They can be identified in the hive by their big round bodies and large eyes.
- If they do not mate, they can live for up to 90 days.

IMPORTANCE OF BEES

- Bees are the only insects that produce food eaten by humans in form of honey and royal jelly.

- Animals like honey badgers, raccoons, some insects and birds raid bee hives for honey and bee larvae.
- Bees are a source of food for many birds and insects.
- Through pollination, bees support the growth of forests that provide food and shelter for both animals and human.
- Without bees, all the animals that depend on plants would disappear.

BEES AS POLLINATORS

- Cross pollination occurs when pollen grains are transferred from the anther (male part) of a flower are to the stigma (female part) of another flower.

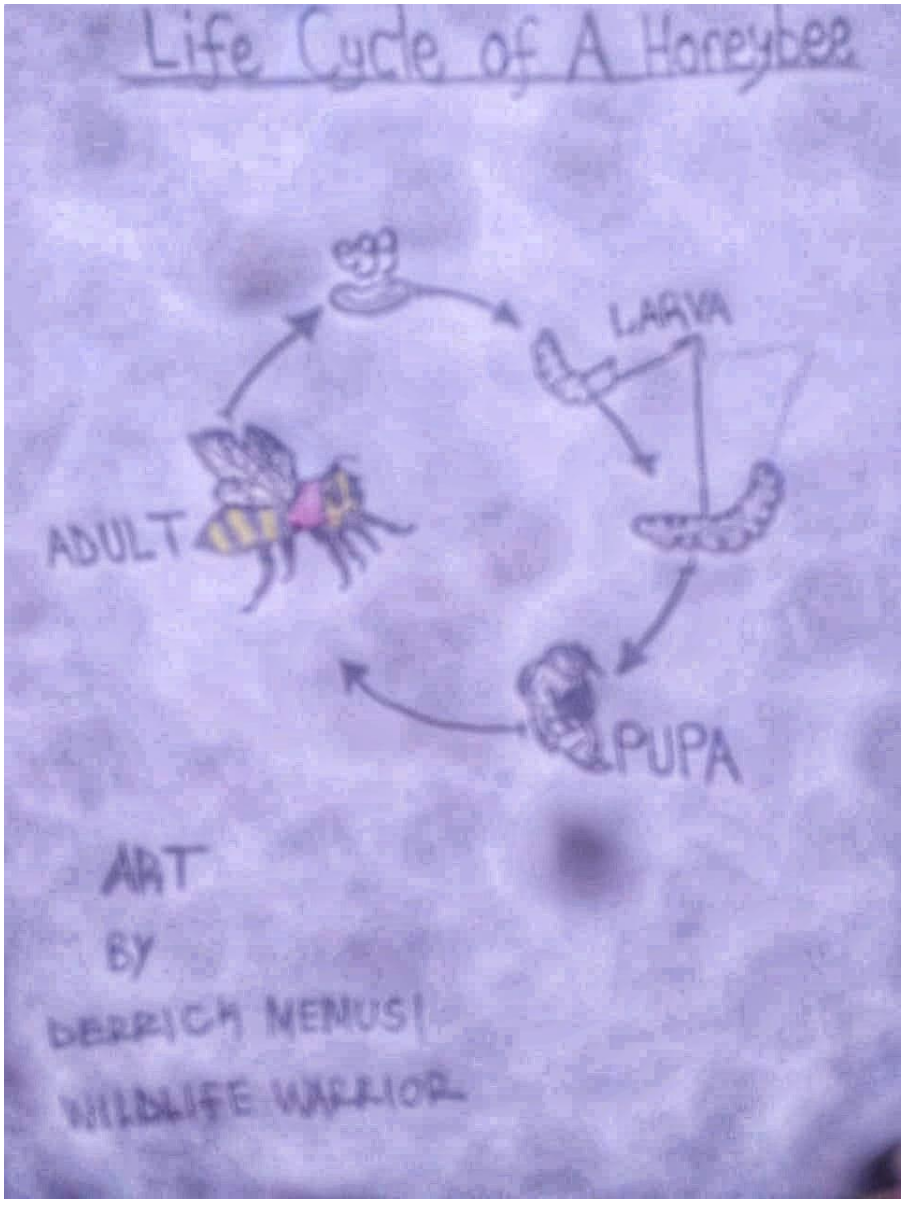
When a worker bee visits a flower for nectar, some pollen sticks on its hairy body and legs. As she moves to other flowers, pollen is rubbed off or falls into stigma of other flowers.

- Worker bees can visit 100 flowers in one trip before returning to the hive and visit up to 5,000 flowers in a day.

- After pollination, fertilized flowers develop fruits carrying seeds for plant reproduction and food.

LIFE CYCLE OF A BEE

- The life cycle of honeybees is divided into **four stages;** Egg, larvae, pupa and finally the adult.



- The queen lays a single egg which is very tiny in each cell that has been cleaned by the workers.
- Fertilized eggs develop into worker bees or the queen bee.
- Unfertilized eggs will hatch and develop to male bees.

- To mature into adults, the three different bees take different times.
- Drone bees take 24 days, worker bees take 21 days and the selected queen bee takes only 16 days.

BEE FUN FACTS

- A single worker bee produces a teaspoon of honey in her lifetime.
- They are the only social insects partially farmed.

- Bees are not selfish, they share information about their food sources through a **'Waggle dance'** by moving in a figure 8 direction!
- Bees can see all colors except the color red.
- Bees have excellent sense of smell that can pick scents kilometers away using their antennae.

- Bees have 5 eyes! Two large compound eyes and three simple eyes on top of its head.

- Honey bees fly at a speed of around 25 kph and beat their wings 200 times per second!

BEE FARMING

- Did you know that honey is five times more expensive than oil?
- The benefits of beekeeping include; to increase bee population, increased pollination, honey production, and thriving vegetation.

Bee farming and honey harvesting © Letoluai Ambrose/ Chui Mamas

- Beekeeping can be done by an individual project in a private area or as a group project inside a forest.
- A farmer who keeps bees for their honey is known as an **Apiculturist.**

Do you have flowers or plants near your home that bees visit? Take a picture of its flower and share with us on **WhatsApp number +254 746 511 787**

THREATS FACING BEES

- **Pesticides-** Chemicals meant to kill other insects harm bees.
- **Loss of habitat-** Bees need large spaces with flowers for food and to build their hives.
- **Diseases and Pests;** Bees can get sick, unable to fly and eventually die.
- **Climate Change; -** This affects the timing of when flowers bloom which means less food for bees.
- **Invasive plant species;-** These are introduced plants that take over a place causing the native wildflowers that bees fed on to disappear making it hard for bees to find food.

ELEPHANT - BEES PROJECT

Elephants do not like bees! Can you imagine that the largest land mammal is afraid of tiny bees. The buzzing sound from a beehive can make an elephant flap its ears and make alarming noises.

When an elephant senses a beehive in a tree or on a post, it produces a low-frequency rumble in response to the bee sound as a warning to other elephants to move back.

A bee sting cannot easily penetrate the thick elephant hide. However, when a swarm of bees attacks an elephant, they can sting the mouth, eyes, or trunk which are the most sensitive and can cause an elephant's death.

Elephant-Friendly Honey

- Habitat loss and reduced land quality are major causes of human - wildlife conflict.

- Human-Elephant conflicts involves cases of crop raiding, injuries and deaths to human by elephants or elephant's killed by human for other reasons apart from ivory or for food.
- The Elephants and Bees project has helped community members in using Beehive fences.
- The Beehives reduce crop damage by elephants, that fear honey bees.
- Increased pollination by bees increases crops yield.
- Farmers harvest honey from the Beehive fences.

What Human-Wildlife Conflicts issues are you facing in your community and what are the solutions?
Share your response to **WhatsApp number 0746 511 787**

MEET DERICK WANJALA

Beehive Fence Project Officer

Q: Tell us a little about yourself.

A: I was born in Sidikho village, Navakholo sub-county in Kakamega County.

I went to Sidikho Primary School, and Sidikho Secondary School, both in Kakamega County in Western Kenya region.

In 2014, I went to the University of Eldoret in Uasin Gishu County to pursue a Bachelor of Science in Wildlife Management and graduated in 2018.

Q. How did you get interested in Bees and why?

A. I became interested in African honeybees (*Apis melifera*) when I was working as Elephants and Bees project intern at Save The Elephants (STE).
I wanted to learn more about African honeybees as a deterrent of the crop-raiding elephants in the field farms bordering Tsavo East National park. I was later employed as a Beehive Fence Project Officer on a permanent basis.

Q. What is the project about?

A: Elephants and Bees project, is a Human-Elephant Co-Existence Program at Save the Elephants, started by Dr. Lucy King as her PhD research in 2016 to help farmers protect their crops from elephants raids.

The scientific evidence behind this idea showed that elephants are afraid of bees.

Therefore, on a crop raiding night, when they approach a farm surrounded by a beehive fence, they shake the hives disrupting the bees that then come out and chase them away.

Q: What does a normal working day look like ?

A: Every working day is a busy day. Every Monday I create my weekly plan. I start with fieldwork activities in the morning ranging from visiting farmers, monitoring beehive fences to crop raiding elephant tracking. The afternoons are mostly for office work, mostly database management.

Q. How would a young person get involved in Bees conservation? What do they need to study?

- You really don't need to study much. Beekeeping has been practiced in many cultures for many years.
- Join a school wildlife or environmental club and learn more about insects, animals and how to protect them.

- Creation of local awareness on the importance of Bees conservation.
- Together with your teacher or parent, you can start a Beekeeping project at school or on your farm.
- Become a Citizen Scientist by collecting photos of insects and flowers and upload on iNaturalist to learn more.

Q. What can we do to save the Bees?

- Grow trees and flowers for bees to find food and a place to build their hive.
- Stop using pesticides, herbicides and chemical fertilizers that are harmful to bees and use organic fertilizers.

- Practice Beekeeping to increase the number of bees.
- Keep our rivers and ponds pollution free as bees need drinking water as they search for nectar.
- Starting a conservation campaign by writing essays on the importance of bees.

WILD JOKES!

Q: What do you call a Bee born in May?

A: A may bee?

Q: Which singer is the most popular to Bees?

A: Bee-yonce

Q: Why did the Bee get married?

A: Because he found his honey!

Q: What do you call a wasp?

A: A wanna-bee

Q: What do you call a Bee that lives in America?

A: U S B

Q: What kind of a Bee is a sore loser?

A: A cry-bae- Bee

Wild Jokes courtesy of Joy Omulupi

Do you have a wild joke to share?
Please share with us your joke on
WhatsApp number to: +254 746 511 787

WHAT YOU CAN DO TO HELP NATURE FOR WILDLIFE

Honeybee populations are decreasing day by day.

Photo by Randy Turi (16 years)

Flower Garden

You can help bees by growing local flowers, fruits, crops or vegetables without use of chemical pesticide / fertilizer.

Your garden will provide a home and nectar for bees as we get high food crop yields and honey.

STEPS:

a) Get bee-friendly flowers or seedlings from a plant nursery.

b) Select a sunny place and, plant groups of same flower types together in a pot or on the ground.

c) Ensure thirsty bees have access to clean shallow water.

Share with us what you are doing to help nature by sharing a picture/video or text on **WhatsApp** to; **+254 746 511 787**

CALL TO ACTION

STOP USE OF HARMFUL CHEMICAL PESTICIDES AND FERTILIZERS

Kenya's human population is estimated to be over 56 million which means there is a high demand for food.

Leparakuo Joshua Tonkei in his school's organic garden

Many farmers are using pesticides and fertilizers to increase their crop production which is both harmful to human beings as the food harvested are contaminated but also affect bees population.

Let us encourage them **NOT** to use chemicals but instead use organic manure and biological pest controls.

ART FOR WILDLIFE

BIRDS

I like it when the little birds come by the window,
They chirp so sweetly and they perch so gently,
They look so beautiful with their colored wings,
What wonderful creatures! It's amazing to see,
them fly under the blue sky.

The honeybee painting and poem on birds was submitted by; **Mikel Baraka (7 years),**
2nd grade pupil at Early Days Preparatory School

Please send a **photo** of your **Drawing, Painting, Poem** or **Essay** on **WhatsApp** to **+254 746 511 787.**

THIS WEEK ON MY WILD AFRICA

This Sunday, we follow the remarkable life of an ostrich family as they survive in the harsh conditions of the Kalahari and Namib Deserts.

The ostrich tries to decide the best time to mate in order to increase chances for the survival of the offsprings.

Tune in at 5:30 pm EAT Citizen TV

Watch the **film** with your family and tell us **what you learnt** by sending an **SMS** or **WhatsApp message** to **+254 746 511787**

COMING UP… DON'T MISS

© Sushil Chauhan

- My Wild Africa on CITIZEN TV every Sunday at 5:30 pm EAT.
- International Cheetah Day - 4th December
- World Soil Day – 5th December
- Monkey Day – 14th December

FOR PARENTS

This newsletter is issued each week to inform, inspire and encourage children who are at home during COVID 19 school closure.

It is distributed completely free of charge to children and their parents anywhere in Kenya, Africa and the world. If you would love to contribute to the Wildlife Warriors Kids, please make a donation to:

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A/C NO: 0100003937598

Email us: info@wildlifedirect.org

Contact us on: +254 746 511 787

To sign up to this newsletter series, click here:

bit.ly/WWKidsSignup

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