Ifa lemvelo

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Natural History Museum of Zimbabwe is home to valuable research collections and is the best museum in Southern Africa, ranked fourth in size among the museums in Africa.

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Entrance fees

Locals
Adults RTGS$20
Children (5-14years) RTGS$ 7

SADC Countries
Adults USD$7
Children USD$5

International
Adults USD$10
Children USD$5

OPEN
EVERYDAY
9am-5pm

Events!!!!

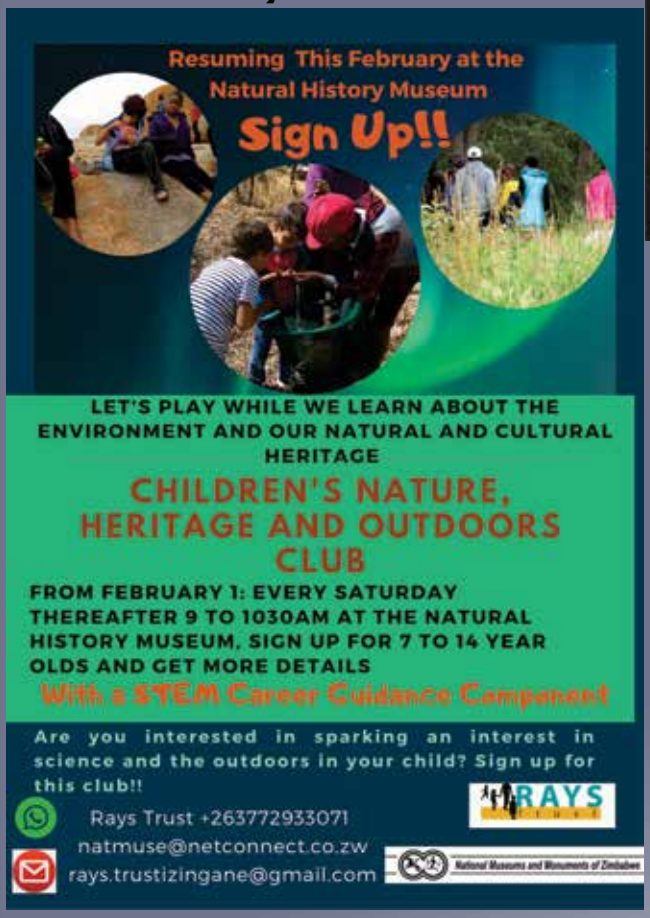
From the Regional Director
Welcome to 2020!

Museumassociation.org undertook research on publicattitudes to the future of museums and their impact as we step into a new decade. What was revealed was that there is a strong, positive emotional attachment to museums by both visitors and non-visitors. Indeed, it appears that attitudes toward museums have become more favourable over the last generation as museums shed their image of stuffiness and sterility and become more entertaining and interactive. The public are also aware of the unique and important role museums play in society which includes:

-Care and preservation of heritage
-Holding collections and mounting displays
-Creating knowledge for and about society
-Facilitating academic/expert research
-Promoting economic growth through tourism, investment and regeneration
-Facilitating individual development through education, stimulation and building skills
-Promoting happiness and well being

For our museum to continue having relevance in 2020 and beyond we rely on your attachment to this wonderful institution and the pride of Zimbabwe. We look forward to your continued and generous support, encouragement and suggestions as we enter into a new period

Sign up your 7-14 year olds so they can come play while they learn every Saturday .



DID YOU KNOW?

.....that the Sweedish naturalist and explorer Carolus Linnaeus died in January 1778. He is famous for his work in Taxanomy and was the first to frame principles for defining natural genera and species of organisms and to create a uniform system for naming them, known as binomial nomenclature. A system still used in museums today when describing new species and most labels in our museum use the common name and the binomial name (Scientific name)

The Marvellous Microbes of Planet Earth: Part 2

By John Minshull

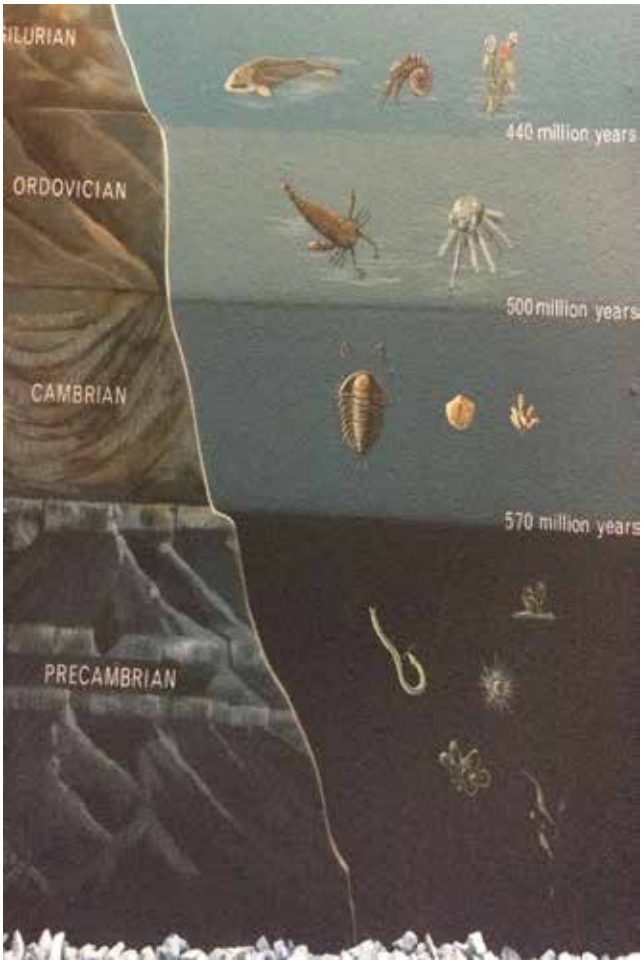
Dr Ernest Rutherford discovered radioactivity early in the 20th Century. Since then huge strides in identifying rocks and minerals and their different radioactive molecules have enabled palaeontologists, chemists and microbiologists to date them very accurately. There are many different radioactive isotopes and techniques used in dating. Either a rock sample or a mineral grain can be dated, extracted from exposed sedimentary layers of rock, laid down over millions of years of Earth's past history.

A "fire-ball" exploded over the town of Murchison in Australia in September 1969, showering the area with meteoritic rocks that dated at ± 4.5 Billion years old. These are thought to be a leftover from Earth's formation. Now the microbial fossils I mentioned previously (Newletter Vol 1 No 9) were the first single-celled life forms to proliferate and spread throughout the Earth. Some of these bacteria evolved chlorophyll, a green pigment that converted carbon dioxide into sugar stored in the cell as starch, releasing oxygen as waste into the air. Other larger bacteria absorbed these small bacteria that remained whole inside them, maintaining their own DNA, thus benefitting the larger with free food! The shores of ancient continents were full of oxygen producing stromatolites and this process was thought out by scientists in Russia in the 1860's and championed by Dr Lynn Margulis [1957–2018] until now accepted by all scientists. This was how the chloroplasts and mitochondria evolved which are present in all multicellular animals and plants on Earth today. This was a symbiosis of organisms called endosymbiosis, and is believed to have been the main drive in the evolution of all multicellular oxygen-breathing organisms to form the Eukaryota.

Time, long periods of time, we call it DeepTime - millions of years went by as trillions of microscopic Protists, multicellular forms, swam around in water and wet biofilms of soils. Many can be seen by eye. Put water from a healthy pond or stream into a glass and hold it up to light! You won't see the microbes though!

Paleaontologists and botanists studied, in ancient fossils, the evolution of algae into much larger seaweeds and then the emergence of lichens first onto land, followed a little later by early fungi then bryophytes [liverworts, mosses] separated by hundreds and thousands of years.

Let us look at the archaea/bacteria complex again. Microbiologists have found that they form large networks throughout soils and sedimentary layers in lakes and seas. Within networks are found masses of bacteria forming nodes or hubs scattered throughout, perhaps over a concentration of nutrients? Now we look at the University of Massachusetts, where Dr Derek Lovley in 2015 discovered that bacteria actually absorb or "eat" electrons form source! In this case an electrode he had planted in lakeshore soil that became covered in microbes. In the laboratory, his team of students and technicians found the bacteria produce "nanowires" from their cell walls through which electrons could pass. Thus on the shore bacteria passed electrons straight from the electrode to fellow bacteria and archaea, who, in connecting up with others, spread electrons away from source in networks, *ie* to feed the mob!



Matabele ants (Megaponera analis)

By Panashe Mudadi

Named after the Matabele tribe which originated in Zimbabwe, a splinter group of the Zulu State of pre-colonial Southern Africa, these are large black ants which usually move in dense, long columns. They are regarded as one of the largest ant species in the world reaching upto 2cm in length. Matabele ants are found throughout sub-Saharan Africa and their nests are subterranean, usually found under rocks and deserted termitaria, and have more than one entry. Their fame comes from their organised, tightly structured raids on termites colonies which they feed on and the way they fight against termite soldiers, similar to the way the Matabele warriors fought and raided other pre-colonial Southern African tribes. They are also known as the African diver ants or hissing ants in some parts of Africa due to the sound they make when disturbed.

Like all other ants they belong to the order Hymnoptera (Bees, Wasps and Ants) and Formicidae family in the Ponerini tribe. They are eusocial insects that live in a colony with three types of castes. There is a queen which is the only individual laying eggs, sterile and wingless female workers and the males (drones). The queen is larger than any ant within the colony, followed by the drones which are larger than the soldiers/workers, who are the smallest of them all. The queen and the drones are the only ones who have wings which they use to fly during the mating season.

These ants mate on the wing, and the queens go off to establish a new colony. Usually there is a division of labour with different individuals undertaking different roles, such as defence or foraging with the younger ones doing nest duties and the older ones foraging. These ants are fast and agile and also do bite and sting; even humans are not spared from this! Matabele ants live in colonies often seen marching in columns searching for food and the columns can be 1-2metres long with 2-10members abreast. These are voracious predators that specialise almost exclusively in hunting and eating termites with particular interest to the fungus-growing termites *Macrotermitinae* .

The raiding parade

The raid or hunt starts with scout ants searching an area around the nest for termite foraging sites without actually getting into contact with the termites or entering into their galleries. After a foraging colony has been identified the scout ant then returns to recruit her nest-mates to conduct the raid (usually carried out in the morning or during evening time). The scout ant has been observed to lay a pheromone when returning to the nest. Upon recruiting her sister workers, she then takes the lead with all other ants following in a column-like formation.

While moving towards a foraging site, they lay a pheromone that will help them to get back to the nest without the help of the scout ant. They move as one entity within a single column with the larger soldier ants on the edge providing protection to the smaller and weaker members. Before the raiding column gets into contact with the termites, it stops and agglomerates until all the ants in the column have arrived. They then a form a sort of a circle around the scout ant (raid leader). This then mimics the cow-horn formation war formation used by Zulu warriors and which was also used the Matebele warriors too. When all the ants have arrived and everything in set, the ants then rush forward in pursuit towards the termites to overwhelm their prey. During the attack, the major ants focus on breaking the protective layer over termite galleries and the minors rush into the galleries to kill the termites. They attack the termite colony, neutralising the soldiers and then killing the workers, which are heaped outside the gallery entry. They steal the eggs and nymphs from the termite colony to take back to their colony as food. During the raid, the ants spread out and break open any soil sheeting constructed by the termites and then small groups of ants dig into the underlying termite galleries. After the raid the ants pick up the termites and also carry them back to their nest. They are known to destroy an entire termite colony.

However, all is not rosy when conducting the raid. The termites also fight back, give resistance. Some ants therefore get hurt or even killed. On another interesting fact, they have been observed to provide help to injured mates or help heal their wounds.

The paramedics…….

During the raid some ants are killed, some lose their limbs and others have termites clinging to their thoraxes or limbs. Injured ants call for help by releasing pheromones which then attract other ants. According to a number of myrmecologist, these ants have been observed to carry back to their nest wounded comrades after a raid. Back at home these ants take turns to nurse the wounds of their sisters. It has been recorded that they lick the wounds whilst holding them with their mandibles. It has been suggested that they will be spreading secretions of the metapleural and venom glands that have antimicrobial abilities that inhibit infections. However, those which may have been severely injured are left.