Ifa lemvelo The Newsletter of the Natural History Museum of Zimbabwe



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The African Sharptooth Catfish (Clarias gariepinus)

A tribute to "The Old Professor"

The heart and soul of

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Message from the Regional Director

Welcome to this issue! International Museums Day 2023

The focus this year was on sustainability and well-being as all museums have a role to play in shaping and creating sustainable futures, and they can do this through educational programmes, exhibitions, community outreach and research

In this issue we highlight just a few of our projects and how our museum is still such an important institution in our society.

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The African Sharptooth catfish (Clarias gariepinus)

Venecular names: Umandevu (Ndebele) / Mandebyu (Shona)

By Nobuhle Sebata-Sithole Assistant Curator, Ichthyology



Picture of Clarius gariepinus caught at Sunde River, Kariba

Catfishes are classified in the phylum Chordata, subphylum Vertebrata, class Actinopterygii, order Siluriformes. The order of Siluriformes possesses a truly staggering amount of diversity. It contains around 3,000 species across 35 different families. The most species-rich and economically most important group is found within the Clariidae family and in the genus *Clarias* currently comprises 61 recognised species of which 34 occur naturally in Africa and 27 in Asia. The African Sharptooth catfish (*Clarias garipinus*) has been described as the second most important freshwater fish in Africa after tilapia.

Clarias gariepinus was first scientifically described by the British natural scientist William John Burchell (1782 – 1863). The generic name Clarias which is derived from the Greek word "chlaros" meaning "particularly vigorous, lively" refers to the fish's ability to survive out of water. The species name gariepinus is derived from the locality in which the catfish was found. Burchell found it in a river that the English called Orange River but in the native language it was called Gariep.

Clarias catfishes are often the only fish to survive in water bodies that dry out almost completely. It is their air-breathing ability that allows them to endure these critical phases during which the fishes often lie tightly packed together in the most confined spaces. This means that high stocking densities in aquaculture are not a problem for them. Clarias species are not

particular about their environment. They are extremely robust and insensitive to external influences — with the exception that they need relatively high temperatures.

The African Sharptooth catfish is the most abundant catfish species in most tropical African floodplain river systems and is an important constituent of subsistence fishery catches. In their natural state in Africa, this species occurs in lakes, streams, rivers, swamps and flood plains, many of which are subject to seasonal drying out.



The African Sharptooth catfish have an average adult length of 1–1.5 m and can weigh up to 30 kg. They grow fast and can attain sexual maturity within two years of age. They have a high fecundity rate that is, can produce many offspring (laying over 3000 eggs at a time). They can also live for 8 years or more. This is confirmed by their presence in diminishing pools of water, drying lakes or rivers when other freshwater fishes have long gone.

These fish have slender bodies, flat bony heads, and broad, terminal mouths with four pairs of barbels. Catfish are so-named because of their whiskers called barbels, which are located on the nose, each side of the mouth, and on the chin. The greatest concentration of their sensory organs is located on these barbels and the main function of these barbels is for the identification of prey and orientation in murky waters. The barbels also have taste buds and hence with this physical adaptation, the fish can find food even in the darkness. C. gariepinus have no scales on their skin, instead their skin is smooth and covered by a thick layer of slime. The body colour varies from greenisholive to shades of grey and deep black, and the back and sides of the body are marbled. They also possess a strong, hollow, bony leading ray on their dorsal and pectoral fins, through which a stinging protein can be delivered if the fish is irritated.

The African sharptooth catfish is not particular about its diet, and being omnivorous feed on plankton, vegetation, invertebrates, carrion and fish and may exhibit pack-hunting behaviour when foraging for small fish. *C. gariepinus* is a relatively poor swimmer and travel where the food is, through shuffling along on a riverbed or skimming the water's surface looking for larger prey. A catfish's diet changes as it grows, with young catfish eating larvae and insects and mature catfish graduating to insects, snails, other fish and fish eggs. When looking for prey it proceeds purposefully and methodically and does not make any sudden attacks. The fishes are mainly night-active and fulfil approximately three quarters of their nutritional needs after nightfall. The barbels, that are equipped with taste-buds and touch-sensitive mechanoreceptors, play an important role when tracking down prey. The gastrointestinal tract of Clarias can absorb large amounts of food. However, the fishes remain flexible throughout their lives so that even as adults, if necessary, they can still feed on zooplankton that they sieve from the water with their gill rakers.

This fish species can survive in a wide range of water quality conditions. They are highly adaptive to new environments and can thrive in degraded water bodies and in shallow muddy conditions because they can withstand low levels of oxygen in the water. They possess a primitive accessory air breathing organ which enables them to survive out of water for hours or even days, provided their skins and gills stay moist. They have a special respiratory organ which enables them to absorb oxygen from the air in addition to using their gills to breathe. This additional air-breathing organ (suprabranchial organ) is in the upper part of the gill cavity. It consists of a "cauliflower-like" structure (a formation in the mucous membrane of the pharynx) that is well-supplied with blood and has tubular air sacs that run on both sides of the spine towards the body's rear. Aerial respiration enables the catfish to survive in extreme biotopes with low oxygen levels and sometimes they can be found living in groups in the most confined spaces at great densities.

During the dry season the fishes often remain in the mud of swampy ponds for weeks until the next rainy season. If food or spawning facilities are lacking the fishes will also go ashore in search of more suitable habitats. They can even leave the water for a few hours to search for food on land near the shore, change their habitat, or look for suitable spawning grounds. During their land excursions which usually take place at night the catfish crawl forward by twisting their body from side to side. For this they use powerful bony spikes on the pectoral fins hence are sometimes referred to as the 'walking catfishes' and can invade waterbodies beyond their natural range and establish populations in many non-native environments.

African sharptooth catfish is relatively The insensitive to diseases, has no demanding nutritional requirements, and is fairly easy to reproduce. And that is why it has been settled in many regions of the world. They have spread widely in many places and have become a danger to the native fauna because they kill fish, amphibians, insects and have allegedly brought some species to the brink of extinction. For example, they have been implicated in the severe reduction of populations of the indigenous smallscale redfin Pseudobarbus asper in the Gamtoos River system in the Eastern Cape Province, South Africa. Today, African sharptooth catfish are regionally classified as an invasive species.

The African sharptooth catfish are in great demand as a food fish as they are tasty and are produced in increasing quantities in aquaculture; but they are an ecological threat and a real plague in the waters they inhabit.

Explore the heart and soul of the Tonga hinterland at the BaTonga Community Museum

By Phineas Chauke Marketing Officer

Situated at Binga Centre, just by the shore of Lake Kariba, the BaTonga Community Museum is the flagship community museum in Zimbabwe under the banner of National Museums and Museums of Zimbabwe. Since it's inception the museum has played a crucial role in the Education of the nation and the world about the rich history and culture of the BaTonga.

Under the very able and dedicated curatorship of Mr. Joshua Chikozho the museum has gained vast prominence as the centre for the celebration and promotion of Tonga heritage. One of the innovative initiatives by Mr. Chikozho include the extension of the museum into the Community that has seen some homesteads becoming active satellite sites of the museum. This has excited the museum's clients as they get an opportunity to gain deeper insights into the lives of Batonga in real life set ups. Again, this has motivated the local community to embrace the museum thereby fostering a "symbiotic" co-existence

between the institution and it's host community.

MrChikozho's community involvement thrusts are guided by his belief in the philosophy that "the Community is the museum and the museum is the Community" This notion is aptly expressed in the phrase "singing with the people, the song that the people have chosen". In Mr. Chikozho's words, the museum can be described as the community's "very own baby."

In that spirit, the museum's objectives include creating awareness about Tonga culture and history, thereby combating misconceptions and demystifying stereotypes locally, nationally and globally. It seeks to preserve and protect the cultural material of Batonga. It also strives to support community livelihoods through leveraging culture as an industry.

When the President launched the Culture Month Celebrations in May this year at Kariangwe Secondary School in Binga, the BaTonga Community Museum and the Binga Craft Centre were identified as the key exhibitors at the event as a means to shine a light on the Batonga culture. This was a befitting gesture since the BaTonga were the inaugural hosts of that auspicious annual cultural expo. The BaTonga Community Museum lived up to the billing by putting up a show-stopping exhibition that told a clear story and painted a vivid picture of the Tonga culture.

Some of the highlights in the museum gallery include the Buntibe drum which is played by the BaTonga on special ceremonies. The Simwaaba/Nyaminyamiriver God of the Batonga is well represented as well. The famous Inchelwa smoking pipe of the BaTonga which is testimony to the ingenuity and innovation of the BaTonga is well documented and displayed in the museum. The trademark Ngazi (hut on stilts), which minimises the community's risks of being attacked by wild animals whilst asleep or being affected by floods (given that they are a riverine people).



Other exhibits in the museum include the kuvwima (hunting scene), nsangwa (Tonga baskets), chuuno (3 - legged Tonga stool) Bwaato (the Tonga utility dug-out canoe), Bulungu (Tonga beadwork), Nongo (Tonga claypots) and Kkoma (unique Tonga door) among many other interesting objects.



The BaTonga Community Museum contributes immensely to the tourism energy of Binga complimenting other attractions including the Binga Craft Centre, ChibwatataHotsprings, crocodile farm, the sand beach as well as activities such as boat cruising and and an array of sports.

From aspiring computer geek to Entomologist: It takes a village to raise an Entomologist

Tribute to "The Old professor", one of my departed sources of inspiration

By Dorothy C.Madamba Curator, Entomology



Any amount of success huge or small, has a story behind it. My story is not an exception. I am currently Curator of Entomology at the Natural History Museum, Bulawayo, Zimbabwe. If you were ask any woman who overcame any type of obstacle, you will realize that there are those who believed in her when it didn't make sense to do so and they fueled her courage. I too have several people who stirred me own earlier on in life. As my alma mater motto says"a measure of life's worth is it's service". If you grew up playing 'chikweshe' (a make-shift soccer ball made from plastics) in the vibrant and dusty streets of Chitungwiza, Zimbabwe then you will understand why this story means so much to the writer. It is a brief account of the highlights of my interaction with "The Old professor" Professor P.J. Mundy.

In 2004 I applied to the National University of Science and Technology (NUST), Bulawayo for an Computer Science degree and that was the only place in the country where I sent my application for college, the two other places were Luton University in the UK, I was encouraged by our family dentist, the first female dentist I'd ever seen, to apply, and University of Cape Town (UCT), I got accepted at both places. I felt pretty good about myself academically those days; I was barely 19 and fresh out of high school.

Anyways, long story short, Luton was inaccessible economically and was a long stretch for me, I had

no sponsor, UCT needed the annual fees upfront for foreigners, so I had to let them go due to my humble background. The amazing thing was the faith to still try even when I knew I had no money and no sponsorship. FAITH doesn't make sense. Now fingers were crossed for NUST and I got in BUT in Forestry and Wildlife on a government grant and with student accommodations. I was such a bubble of joy and gratitude that I didn't care what the degree was as long as I had something to do. And thus I started my 4 year journey in an BSc. Honors in Forestry resources and wildlife management at NUST.

One of the first classes in the first semester was Humans and Wildlife and that's when we met Prof P.J. Mundy for the first time. I was then set to have him impact my life for the next 18 years. To be quite honest he was unexpected, not your usual, with his Khaki shorts, black t-shirt Khaki sunhat, glasses, white hair and a large bottle of water, it all went against my stereotype of a university professor. That first meeting was my introduction into the wonderful world of outliers and it endorsed my already existing inclinations towards sticking out from the crowd.

Since thenI have since realized that the same person can have different characters and mean different things to different people depending on who is looking, so this is just a few notes from my interaction with Prof Mundy. Not your conventional professor, he was quite animated when he taught and definitely challenged all norms and ideas leading us to think in other terms. I remember our lectures delved into evolution and the origins of man, environmental issues, issues of spirituality, the value of totems and so on.

In one such lecture, Prof Mundy brought a bible to class and made a claim that there was no such thing as Satan except in people's minds invented by people who did not want to take responsibility for their own actions, his evidence was that there was no mention of Satan in the old testament and if anyone knew anywhere where Satan got mentioned in the bible they must let him know, he was willing to bet! Boy was that the longest toilet break we ever had for me, soon as he got back my hand was up and I asked him to open his bible from Job 1:5 and read out loud, his jaw dropped when he reached the word Satan, I

remember him saying, I'm always happy to pay for learning something new as he took a US \$20 from his wallet and handed it to me. From that day Miss Dorothy earned the professor's respect and gained a whole lot of confidence in herself. I am a proud owner of a bible bought with that US\$20, a reminder of this incidence.

There are certain things that are constant reminder of the old professor, every time the Gray Laurie says "Go away", or the Red-eyed Dove and Cape Turtle Dove make their sound it is a constant reminder of the enthusiasm and extra mile he went to teachus all things that had only been accessible to a few in the past, from my first target practice with his gun to my first wheel change on his truck. He was that invested, he went the extra mile more of a fatherly figure, showing the ropes.

I am totally aware that my tertiary education background was not without the grace of God as there were a lot of things that were provided merely by grace, those were also the days of the government grants for degree programs which would have been otherwise impossible. Never once did our interactions become a constant reminder of the poverty we were fighting to break away from. Its already been a number of months since his passing and my brain hasn't registered this still. Without waffling, let me share five of the many things I picked up from my interactions with Prof Mundy.



1. True benefits from a career do not always immediately accrue in dollars and cents.

Prof Mundy echoed my father's sentiments when he taught the principle of going after the long term benefit while enduring the immediate discomforts, I'm sure I need not explain further to anyone who had to do industrial attachment. With the right attitude the wealth of skill and knowledge after the time is priceless.

2. In any career, one of the biggest assets you have is your willingness to learn new things at whatever cost.

In you early career one is likely to give more than they receive, and I'll add that the wisdom is in knowing when the seasons shift.

3. No man is an island.

Professor Mundy's role taught me that wherever possible, one should choose to be a bridge, or pillar for the younger generations if these institutions and fields of science are to have a longer lifespan. I can give testimony that "The Old Professor" had a hand in the discovery of my love for teaching children, my love for bringing scientists together on educational and research platforms as well as the courage to step into new territory. He was one of the patrons of the very first Reach A Young Soul (RAYS) Trust Symposium and saw it through to the 7th Edition. My very first formal interview guess who I found on the panel!

4. "N'angahaifambirimurwere"

I can recall his accent even as I type this proverb, simply put, you are who you are waiting for, identify what you want and GO GET IT!

5. Attitude is everything

Finally the fifth lesson drawn from interactions with Prof Mundy is that the bigger battle is within you and I learnt this early on, as I started coming across gender and race related challenges. These challenges wherever you find them, with the correct attitude you can get through them and hopefully change other's beliefs, perceptions and attitudes along the way.

Now, I've had many people to look up to and in this regard, my life has been rich so far. Hopefully the few lessons I have shared will give you a window into a few of the many teachings that one of those lives has taught me. If you're reading this and your professional journey is starting, I wish you all the best, it's really up to you to work towards your dreams, if you can imagine it, then it can be done!



Reviving Museums through quiz: National Heritage Quiz Competitions 2023; A major event held by the National Museums and Monuments of Zimbabwe in post Covid 19 epoch

By Mgcini Dube, Heritage Education Officer-Western Region

The national heritage quiz competitions are a major event held by the National Museums and Monuments of Zimbabwe annually. Since the outbreak of the Covid 19 pandemic in 2019 and leading to restricted gatherings and ultimate shutdown in 2020, the competitions were then suspended only to be resumed in 2023, with the Natural History Museum in Bulawayo hosting. The competitions were held on 19 May under the International Museums Day theme "Museums, Sustainability and Wellbeing".

Under the expanded heritage quiz programme, each of Zimbabwe's provinces were represented by a winning team. Western Region was represented by three schools from the region namely AMR Sisters Primary from Lupane (Matabeleland North), Beitbridge School Government Primary (Matabeleland South) and Hugh Beadle Primary (Bulawayo Metropolitan Province). Southern region(Masvingo) was represented by Helen Mcghie Primary while Eastern region (Manicaland) was represented by Mt Mellaray Primary. Northern region was represented by four schools; Trojan Mine Primary (Mashonaland Central), Mt Sunset Primary (Harare Central), Hurungwe Primary (Mashonaland East) and Duddley Hall Primary (Mashonaland West).

The national heritage quiz competitions were held in The Bulawayo Amphitheatre, Centenary Park. The stage was designed by the Exhibitions Officer Mr. N. Ngungu. The event started with a march from the Joshua Mqabuko Nkomo statue, along Joshua Mqabuko Nkomo Street and proceeded along Leopold Takawira Avenue to the museum and finally proceeding to the Amphitheatre.

The event started with a selection of speakers starting

with welcome remarks from the Executive Director of the National Museums and Monuments of Zimabwe, Dr G.Mahachi(Picture). In his welcome remarks, he thanked the schools for supporting the programme even after a long Covid-19 induced break. The Guest of honour for the day was Mr. Nyoni who represented the Minister of State and Devolution for Bulawayo Provincial Affairs.

The quiz master for the day was Mr. N.Masukume who worked with diligent teams of judges, recorders, and scorers. The quiz paper consisted of five sections namely: The Past/History, Object identification or Heritage Conservation, Science and Nature, The Environment and General Knowledge. There was a variety of entertainment throughout the whole programme as various groups offered well organized pieces of entertainment.

Mrs S.Kaseke, Head St Patrick's Primary School in Bulawayo announced the results and all the participants and their teachers received certificates as well as prizes. In addition to these, positions one and two received a trophy and a shield respectively. The competitions clearly revealed the effective role played by museums in dispatching valuable heritage knowledge to the communities.

We would also like to thank our many sponsors including Econet Wireles and Gids Martz for their donations that went along way in motivating our competitors as well as adding value to the entire programme.

Results table

School	Province	Total Marks	Position
AMR Sisters Primary	Matabeleland North	47(+2 tie breaking)	4
Beitbridge Government Primary	Matabeleland South	43	9
Chinyenyetu Primary	Midlands	49(+4 tie breaking)	3
Dudley Hall Primary	Mashonaland West	48	2
Helen McGhie Primary	Masvingo	50	1
Hugh Beadle Primary	Bulawayo Metropolitan	41	8
Hurungwe Primary	Mashonaland East	40	10
Mt Melleray Primary	Manicaland	43	9
Mt Sunset Primary	Harare Metropolitan	41	8
Trojan Mine Primary	Mashonaland Central	44	5

National Heritage Quiz Finals in pictures



2023 Winners Helen McGhie Primary School, with the Regional Director for Western Region(Dr M FitzPatrick and their teachers

Mpumelelo Primary School drum majorettes leading the march



Hloseni Arts on stage



Ntabazinduna Prison and Correctional Services Band lead the march into the museum before proceeding to the Amphitheatre



The Executive Director of National Museums & Monuments of Zimbabwe, Dr G Mahachi giving welcome remarks



Guests and learners following the proceedings at the Amphitheatre



The Directors of the Ceremony, Mr P Chauke and Mr J Nyoni

Commemorating the 60TH ANNIVERSARY of the current museum building (March 1964 - March 2024)



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