



■ METRO



THE False Bay Nature Reserve in Zeekoevlei. | TRACEY ADAMS African News Agency (ANA)

New by-law does not hold water, says expert

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A LOCAL water researcher and expert says the city's new draft by-law regarding nature reserve use was not "free-flowing".

Senior lecturer emeritus of Stellenbosch University's department of global health Dr Jo Barnes said the by-law would interfere with independent water research.

According to the by-law, no person may carry out research in a nature reserve without written authorisation from the city. To do so, a research proposal must be submitted to the city.

The by-law aims to effect regulations in the administration of nature reserves in terms of the National Environmental Management: Protected Areas Act at local government level.

The city planned to introduce new administrative requirements which were not included in current regulations.

Barnes said: "Surrounding areas particularly in the water courses (rivers) that run through conservation areas heavily impact on the ecology of the reserves. Scientists monitor many aspects of reserves."

She said she collected water samples in a reserved area to show levels of all sorts of organisms present that were not impacted directly by human activity.

"Other scientists take samples to check up on the state of the environment or for instance to track the effects of climate change or other changes."

Barnes said scientists were not actively trying to monitor municipalities when retrieving samples.

"There are assumptions that researchers are all taking samples to check up or spy on the municipality."

She said this revealed a worrisome habit of silencing or discrediting possible critics who were assumed to be gathering information to question municipal service delivery.

"This is really counter-productive in the long run because poor performance of municipal services cannot be hidden forever. The extent of pollution and releasing poorly treated or untreated sewage into the environment is becoming visible for all to see."

Silencing the messengers who are in possession of the hard facts by making it impossible for them to take samples is possibly unconstitutional, said Barnes.

"Members of the public visiting these reserves legally far outnumber us in a small band of persons. We are trained to look after the environment and to study it. So even the argument that we may be damaging the reserve does not hold water."

The city, however, maintained that the draft by-law sought only to make researchers apply for permission.

Mayoral council member for spatial planning and environment Marian Nieuwoudt said: "We just ask that they seek administrative permission to do it."

She said the by-law asked independent researchers to share their findings with the city, which would allow for a comparison of data.

"The platform will share data that everyone can work off of. It is a process that is being worked on."

"The initial reason as to why the by-law was initiated was to ensure that plants and animals were protected."

Water and air, the two essential fluids on which all life depends, have become global garbage cans.

JACQUES YVES COUSTEAU
French naval officer, explorer, conservationist, filmmaker, innovator, scientist and researcher



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GLOBAL CONDOM SHORTAGE LOOMS AFTER LOCKDOWN

A global shortage of condoms is looming, the world's biggest producer said, after a coronavirus lockdown forced it to shut down production. Malaysia's Karex Bhd has not produced a single condom for more than a week.

■ BIRD TALK



A STUDY of king penguins at Marion Island, along with two other species, has revealed that penguins may be communicating under water. | FLORIAN ORGERET

Penguin 'communication' find

NMU researchers stunned by sounds from the birds

NICKY WILLEMSE

IT IS well known that marine mammals such as whales and dolphins communicate under water – and it seems penguins can, too.

A team of researchers led by Nelson Mandela University (NMU) made the unique discovery, with the help of tiny video cameras taped to penguins' backs.

It is the first time seabirds have been found to produce sound under water. While the researchers are unsure what the penguins are saying, most of the vocalisations were made just before they captured prey – so are likely to relate to hunting.

"The use of acoustic signals at sea could potentially enhance seabirds' foraging success, but this remains largely unexplored," said Andrea Thiebault, a post-doctoral researcher at NMU's Marine Apex Predator Research Unit (Mapru) in Port Elizabeth.

Working with animal acoustic communication experts at the National Centre for Scientific Research (CNRS) in France, Thiebault scrutinised hours of video footage to identify the vocalisations made by six king penguins, 10 gentoo penguins and two macaroni penguins at Marion Island in the southern Indian Ocean.

A paper on their research was published in the journal PeerJ.

■ PETS

Campaign finds foster owners

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SOUTH African-based website Brownie Points launched their #BeatCoronavirus campaign to find foster parents for pets and help companies commit to curbing the effects of Covid-19.

Co-founder of Brownie Points, Blake Dyason, 33, said the campaign started after the president's speech.

"We quickly became aware of the many challenges South Africans would be facing and especially the vulnerable," he said.

The campaign which, called on individuals to pledge to wash their hands, stay at home, foster dogs and help the vulnerable with necessities, launched last week.

"We believe that people really care and want to make a difference."

"We make it easy, fun and rewarding," said Dyason.

The website helps companies manage and track their social responsibility. It allowed companies to empower their staff to contribute towards organisations and initiatives within their own communities.

The number of organisations that signed is 14. Individuals initiated 41 ways to give back to their communities with 48 commitments and 20 supporters. Animal shelters are faced with challenges over the 21-day lockdown, as staff and volunteers can't travel.

Brownie Points makes it easy to find the shelters looking for help and foster parents. Each shelter has its own requirements.

Fostering of furry friends reached a total of 100 dogs at Tears animal adop-



NELSON Mandela University's Andrea Thiebault, right, assisted by volunteer Melanie Wells, deployed a tiny camera and microphone on a Cape gannet, to assess how the sea birds interacted while foraging. It was the study that sparked Thiebault's interest in research of how penguins communicated at sea. | SUPPLIED

lished in the journal PeerJ.

Thiebault was keen to hear the vocalisations made by king penguins – as they have very advanced acoustic signals on land.

"King penguins have developed the most complex acoustic signals."

"They have the ability to extract

vocalisations (from their mates) from the background noise of the colony, known as the 'cocktail party effect'."

King penguins are also the most capable of the three species when it comes to diving – using their modified wings to propel themselves to depths of more than 300m.

"What I find extremely exciting is the fact that penguins, which are the most aquatic-adapted seabirds, show similarities to marine mammals," said Thiebault.

"The research team recorded 203 underwater vocalisations from the three species during four hours and

43 minutes of underwater footage.

The vocalisations were very short – 0.06 seconds on average – and very different from the penguins' land vocalisations, which are around three seconds long and include a variety of different sounds.

"The vocalisations of seabirds have been intensively studied at their breeding areas on land, but it is challenging and so exciting to study their communication at sea. We know very little about this behaviour," said CNRS senior scientist Thierry Aubin.

Prior to the Marion Island study, the team was studying how Cape gannets and African penguins interacted with their own species on the surface of the sea during foraging trips.

"With African penguins, in a study led by Dr Alistair McInnes, we found that their calling increased in frequency when they went out feeding on their own."

"This told us that they call to aggregate or attract other penguins. This is an important finding, as our previous research showed that their foraging success is greater when they forage in groups," said Mapru head, Professor Pierre Pistorius.

He said the penguin calls could mean anything – perhaps "hooray, food!" – but they could possibly also be used to disorientate prey.

"Clearly, the reasons for this interesting phenomenon needs further investigation."

See the full research article at: <https://doi.org/10.7717/peerj.8240>.

See video at: https://www.youtube.com/watch?v=2qq_51X04ao.

■ CONSERVATION

Black rhino numbers rising

SHEREE BEGA

AFRICA'S critically endangered black rhinos may be lumbering slowly towards recovery, but they are "not out of the woods yet", said wildlife vet Dr Jacques Flamand.

Last week, the update of the International Union for Conservation of Nature (IUCN) Red List of Threatened Species found that between 2012 and 2018, the black rhino population grew at a "modest" annual rate of 2.5% from an estimated 4 845 animals to 5 630 in the wild.

Population models predict a further slow increase over the next five years.

The IUCN credits the slow increase to conservation efforts to counter the persistent threat of poaching.

"While it's true numbers are growing, it should be noted that growth of most populations is slow in most regions, that poaching further slows that growth rate and that numbers are not that huge," said Flamand, who heads WWF's Black Rhino Range Expansion Project (BRREP). "Without concerted conservation effort, that growth would not have occurred."

Black rhinos in southern Africa have been "lucky", as there are many more white rhino to bear the brunt of poaching.

But numerous threats continue to jeopardise the species' survival. This includes the demand for rhino horn; habitat loss; a "laissez-faire" attitude by some conservation bodies; under-funding by governments and "lazy officials"; and corruption in law enforcement agencies, he said.

"Poverty and greed make it not only attractive to poach, but also to keep quiet about poachers in an area

in exchange for possible benefits. This can mean unsympathetic communities."

Very often, game parks have huge neighbouring communities that "get no benefits from the parks" while porous game parks and international borders allow easy transit from inside to outside.

The IUCN says the rise in black rhino numbers is largely due to continuing law enforcement efforts and successful population management measures, including moving selected rhinos from established populations to new locations to keep populations productive and increase the species' range.

Flamand started the BRREP in 2004 to address the low growth rate of black rhino in South and southern Africa.

"Its newly created South African populations are nearly all increasing at a greater than 5% level and areas from which black rhino were removed to create those populations are also increasing faster."

The project has created 13 new populations of black rhino and the animals have also been moved within other countries, such as Namibia and Kenya.

While Flamand feels a sense of achievement, his was a team effort. "The creation of partnerships between landowners and conservation bodies was key to making it happen. That involved many dedicated people."

"We still need much more land if the impetus is to be maintained. Land is the limiting resource and having landowners with the means and will to take part in the project is not easy in this day and age."