



# CODE GREEN

Toyota's Enviro Outreach researchers visited Kosi Bay to barcode the DNA of the area's unique plant and animal life. TASTE's **NICCI COLLIER** joined them, foraging for food and insights into a people who rely on biodiversity every day

PHOTOGRAPHS CHRISTOFF LINDE, ANDREW DEACON AND RENIER BALT



This page, clockwise from top left: A Bouton's skink, found in the species' southernmost location at Black Rock; the thick shell of the green monkey orange cracks open to reveal its delicious, sweet flesh; collecting specimens at Black Rock; lush vegetation is characteristic of the area; scientists collect insects and plant species; one of the botany team's finds; Barnabus Daru studies samples under a microscope; fishing and filming at Black Rock. Opposite: The crystal-clear waters of the Kosi Bay estuary are known as "the aquarium".

"Fungi" – as she is affectionately known by her fellow scientists – is slumped on a wooden campsite bench begging us to pray for rain. If it does not rain, her mushrooms will not bloom. "You get big, delicious steak mushrooms here," she says. "They grow on termite mounds after the rain and the local people collect them and sometimes sell them on the side of the road. There are also smaller edible mushrooms – *Termitomyces microcarpus* – which look beautiful, like snow on the ground. But you need a lot of them because they're tiny and practically disappear when you cook them."

While Fungi (Dr Mariëka Gryzenhout) and the other Toyota Enviro Outreach researchers are in the area to collect samples for DNA barcoding, locals and visitors forage for mushrooms, pick fruit and set fish traps for the far less scientific purpose of eating. Kosi Bay is a largely unspoilt paradise that hugs the Mozambique border and readily gives up an abundance of fare.

Perhaps most obvious is its seafood. The Kosi Bay estuary is known as "the aquarium" for its clear waters and abundant fish species, and is home to the fish traps of the Thonga people. Handmade from reeds and twigs, the carefully managed traps are passed down from father to son. Catch of the day here could include mullet,

telapia, grunter, rock salmon and yellowfin bream. And in the estuary and rock pools are mussels, oysters, prawns and eels.

Easily skimming through deep, sandy tracks in our Toyota Fortuner, we arrive at the estuary, where we meet Olga Manzini, who monitors fishing in the reserve. She shows us piles of rock and shell, discarded by local families who collect red bait from the rocks and use it for fishing or to make a soup prepared using the edible sea squirt and grilled peanuts.

Peanuts are a popular staple here. Ken Whitfield, who runs the nearby Utshwayelo Lodge and Camp, describes a popular spinach-and-peanut sauce served with pap. Among his other favourites are deep-fried bean cakes with chilli and a vetkoek-type bun. "You can buy it all at a market just across the Mozambican border," he says, "and it's all just delicious."

Lying in the beach sand is a discarded coconut shell. According to Enoch Tembe, who works at Utshwayelo, the trees were planted in the 1960s as a community initiative for the local people. "People still climb the trees and eat the coconuts," he says, "but the commercial side never took off"

Enoch describes many other indigenous fruit used in a wide variety of ways. Quite unlike anything you're likely to find at a grocery store, green and black monkey oranges are prolific. "Before they ripen, they're terrible," says Enoch's colleague, Armstrong Manzini. "But when ripe, they're yellow and sweet."

The large seeds of the monkey orange are dried in the sun and their inner cores removed, roasted and crushed with sugar to form a sweet butter. The seeds of the Natal mahogany tree are boiled and eaten with sweet potato; the saps of the wild date palm and the ilala palm are used to make palm wine; and the fruit of the marula tree and African mangosteen are collected and used in local cuisine.

Navigating across difficult terrain – no match for the robust Toyota Hilux and Fortuner vehicles – and surrounded by thick vegetation, ichthyologists and entomologists, botanists and myrmecologists are having a field day as they collect samples for the International Barcode of Life (iBOL) project. For the warm and hospitable Thonga people, foraging is not a foodie buzzword but a way of life, and the sustainability of bio-diversity is essential for the generations to come.



**HUNTING AND GATHERING**

Supported by Toyota South Africa, the Canadian-led International Barcode of Life (iBOL) project spans 26 countries, bringing together hundreds of leading scientists. Their goal? To record DNA and build a database of information about life on Earth for use in species identification and discovery. Setting off in a fleet of Toyota Hilux and Fortuner vehicles, the aim of the Kosi Bay expedition is to collect specimens – fish, molluscs, spiders, insects and ants, trees and fungi – from this unique area. Toyota's Calvyn Hamman says the company's support for the Enviro Outreach and the iBOL initiative is proof of its commitment towards a sustainable future. "By supporting this project we can contribute towards the sustainability and protection of our vast biodiversity. This is crucial to ensure the survival of our environment and is in line with one of Toyota's core values – sustainable mobility."



This page, clockwise from top left: Studying the morning's finds; the Toyota convoy sets off from Johannesburg; silhouettes at sunset; indigenous fruit abounds; green and black monkey oranges. Opposite, clockwise from top left: Dr Andrew Deacon crosses the river at Kosi Bay; Thonga boys tend to traditional fish traps; Dr Brigitte Braschler, the ant expert; unpopulated stretches of beach at Black Rock.

**DID YOU KNOW?**

By 2015, iBOL participants will gather DNA barcode records for five million specimens representing 500 000 species. This will deliver a highly effective identification system for species commonly encountered by humanity and lay the foundation towards a barcode reference library for all life.

