

Heading to Namibia to join a volunteer expedition studying big cats and elephants, Matt Havercroft learns the art of bush tracking, box and camera trapping and radio telemetry in the name of science

Here: a herd of white rhino arrive at the waterhole at Okambara Elephant Lodge in Namibia. Right: the team track the elephants using VHF radio telemetry



# FOOTPRINTS IN THE sand

**T**HERE WAS SOMETHING WRONG WITH THE TELEMTRY KIT. WE HAD SPENT HOURS DRIVING TO THE TOP OF EVERY HILL AND VALLEY TO FIND A SIGNAL BUT HAD HEARD NOTHING BUT WHITE NOISE.

Reaching the perimeter fence, we scanned the horizon again and, as if charged by willpower alone, the receiver crackled into life with a faint, but distinct metronomic *bip, bip, bip*. It was the noise we had been waiting for: the chase was on. Jörg gave the sign to go and we took the next track in the direction of the signal, our conversation dropping to a whisper as the Land Cruiser rocked us through the soft red sand towards our target.

Every 10 minutes we cut the engines and scanned the savannah again, the radio signal rising as we followed its lead. This wasn't going to be easy. Ahead of us was some of the densest acacia we had seen, while the network of tracks seemed to be leading us away from where we needed to be. We tried heading into the bush but it was hopeless, the thick, thorny scrub forcing us to turn back.

## HERD MENTALITY

With the sun starting to slide towards the horizon, we had resigned ourselves to giving up when Jörg suddenly shouted for the driver to stop. There, above the tree tops, we saw a slither of grey back, followed by the flash of a huge fan-like ear. It was her. Thanks to the signal emitted by her radio collar, we had located the reserve's lead elephant and there was now less than 70 metres of brittle bush separating us.

As she set about decimating the shrub in front of her, the rest of the herd began to appear like giant grey spectres. In total there were nine elephants (five cows and four young bulls) and they were heading straight for us. We reversed back down the track just as the first elephant appeared, followed by two, three, four more. Stepping to the front of the pack was a precocious young bull that Jörg had warned us about. He was the most →

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## With mountains to the west and vast expanses of savannah to the east, it was a daunting study area

*Clockwise from left: the elephants make their presence known; dusk at the expedition camp; changing the tyres on the Land Cruisers is all part of the training; a herd of impala emerge from the acacia*

Running the show was our American expedition leader Alisa, who had arrived from Idaho a few weeks earlier to prepare for the arrival of seven successive volunteer groups before the summer rains arrived.

Although the rest of my group was due to stay for two weeks, I had only six days and the clock was ticking. Our task was simple; to collect data to assist two resident scientists with their research. The first, Vera Menges, was studying the behaviour of leopards for her PhD from Freie Universität Berlin, while her colleague, Jörg Melzheimer, was here on behalf of the Leibniz Institute for Zoo and Wildlife Research, studying cheetahs and the impact of elephants on commercial farmland.

With 80 per cent of Namibia's wildlife confined to similar, privately-owned game reserves, their research is helping to improve knowledge about the study species' behaviour, inform decisions about acceptable stocking levels and land management, as well as reducing human-wildlife conflict between farmers and predatory cats, such as leopards.

### IN AT THE DEEP END

On arrival, we were told that the first two days would comprise of training in everything from radio telemetry and tracking footprints, to setting box and camera traps and wildlife identification, as well as practical field skills such as marking GPS waypoints or changing tyres on the 4WD vehicles. The evenings would be spent recapping the events of our day, checking memory cards from the camera traps, entering the data we had collected or getting briefings from the scientists.

Our heads swimming with the task at hand, we →

aggressive member of the herd and the most likely to charge. Minutes passed as we remained trapped in this breathless Mexican stand-off, until, finally, hunger took over and the herd swung back into the bush, their departure almost as swift as their arrival.

Three days earlier I had arrived at Okambara Elephant Lodge, a private game reserve and scientific research base three hours drive east of Namibia's dusty capital, Windhoek. Spread over an area of 150km<sup>2</sup>, with mountains to the west and vast expanses of acacia savannah to the east, it was a daunting study area. Together with 13 other willing workers I had travelled here to join a research project run by volunteer organisation, Biosphere Expeditions. Within our group were four Brits, four Australians, two Americans, one German, one Norwegian and an Austrian. Collectively we had an age range of 20-something to 80-plus, with professions as diverse as advertising, manufacturing, teaching and religion, but the thing that united all of us was a passion for wildlife and a desire to protect it.



We set off as the sun was still rising, the frosty dawn wind stinging our eyes



## BIG CAT CONFLICTS



### How research is helping to save Namibia's leopard population

The leopard (*Panthera pardus*) is a stealthy and nimble predator that is notoriously difficult to find. Primarily nocturnal and solitary, leopards have a home range that overlaps with their neighbours; the male's range is much larger and generally overlaps with those of several females. A leopard usually does not tolerate any intrusion into its territory except to mate.

Among all the countries in sub-Saharan Africa, Namibia has great potential for maintaining a healthy leopard population, due to its open landscape, low human population and strong conservation ethic. According to the results of a 2003 study there are estimated to be around 8,000 wild leopards living in Namibia and many of these have territories that include large areas of fragmented commercial farmland, causing them to come into conflict with the farming community. The problem of human-predator conflict due to predation on livestock and, more recently, antelope species, thanks to the booming game ranching industry, is well documented. Many farmers view the leopards as vermin, hunting them, using traps or leaving poison to remove them from their land. In most cases an individual animal is responsible for stock losses, but practical solutions on how to minimise the risk of predation (especially in game ranching) are currently lacking.

One possible solution is the intensive monitoring of the leopards through tagging, tracking and camera trapping in order to shed light on their home ranges and hunting preferences. The results of these studies and the data they generate can then be used to develop advance risk avoidance or even leopard translocation strategies.

stepped out into the garden of our camp and got our first taste of what was to come. Standing around the watering hole it overlooked were four of the farm's six white rhinos, including a juvenile that hid shyly behind its mother's legs. Oblivious to the volley of snapping camera shutters they had inspired, the rhinos stayed for around 15 minutes before padding back into the tree line.

### CAUGHT IN A TRAP

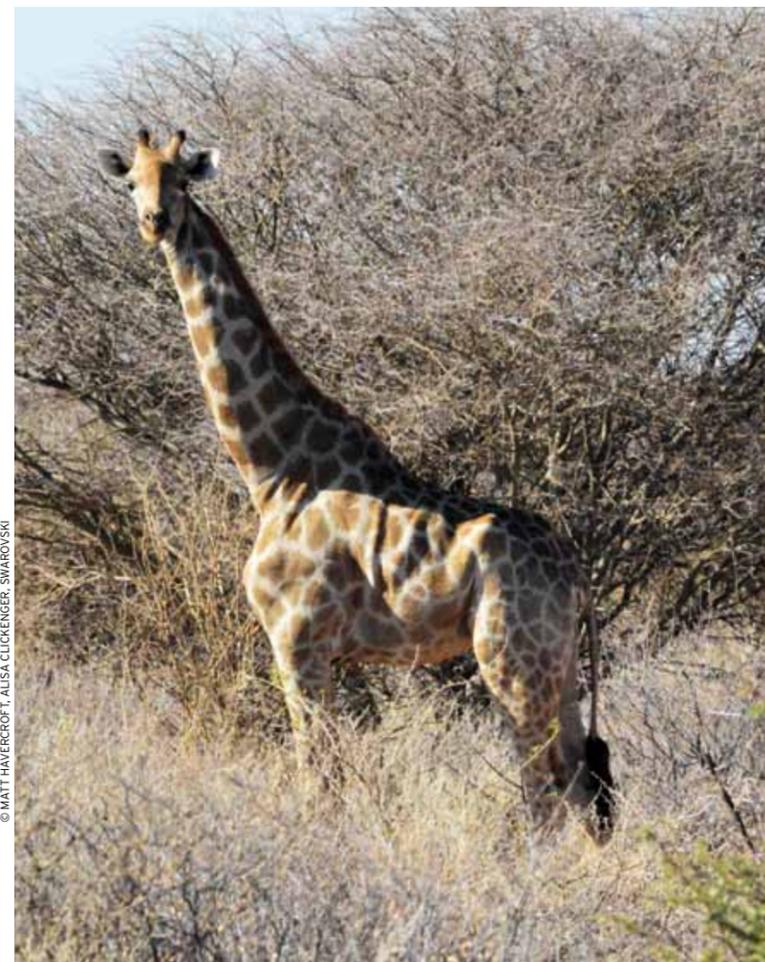
With our training duly completed, the days that followed were divided into different activities, with teams of four or five assigned to each task. I had already spent a day recording the wildlife that came to drink at Boma, one of the farm's seven water holes, from the cover of a treetop hide, and another tracking the elephants, when I signed up to join Vera and three others as they checked the box and camera traps that had been strategically placed across the study area. While radio telemetry was the most effective tool for tracking the elephants, these traps offered our best opportunity of locating the infinitely more elusive leopards.

Our first port of call was a box trap that had been hidden near to a waterhole about 30 minutes from our lodge. These cages, measuring around three metres long by 1.5m high and wide, have suspended trap doors that fall shut when an animal, attracted by meat inside, steps onto a panel in the floor. Although effective, the traps are unselective and we had been warned that leopard

captures leading to a successful collaring were rare. Even if we caught one, only a fully grown adult could be collared due to the fact that leopards' necks are as wide as their heads. For juveniles that are still growing, the collars, which stay on for up to four years, could become a choking hazard.

Despite the slim odds, there was still a hushed air of excitement as we approached our first trap – not least when we arrived to find that the door had been triggered. Vera jumped out of the vehicle to see what was inside. "It's a porcupine," she said, smiling. She lifted the door to release it, but it took another five minutes of gentle coaxing before the porcupine made its break for freedom, its quills bristling as it darted under a bush. With our first captive successfully released, we reset the trap, covering the sides with thick acacia branches and the base with sand, grass and animal scat.

While the box traps offered the possibility of a live capture, the camera traps offered the chance to monitor all of the wildlife that passed within range of their sensors. In a study area the size of ours, the challenge was deciding where to put them. "I choose the locations of the camera traps based on our observations," explained Vera. "The leopards tend to spend their time moving between the mountains and the waterholes so I've set up the cameras along the paths between them, but it depends what you find. For example the last group found a hole in the fence, so we put a camera trap there



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Clockwise from top left: Scientist Vera Menges sets a box trap; kudu are easily identifiable by their large ears; a lone black wildebeest; putting the camp's binoculars through their paces; a giraffe clocks our clicking cameras; a porcupine caught on a camera trap

and got photos of two leopards in a week."

We had no such luck. Despite retrieving memory cards from four cameras across the farm, the evening was spent reviewing pictures of everything from zebra, wildebeest and oryx, to kudu, a honey badger and even the legs of a passing giraffe, but the leopards had eluded us.

On my final day, Alisa organised a vehicle game count. I was placed in a team with Jesaya, the project's expert tracker, and our task was to drive along the western side of the farm, following a 10km route that would take us up through the mountains to the main tourist lodge.

We set off as the sun was still rising, the frosty dawn wind stinging our eyes, but just 10 minutes from camp, we lurched to a stop and Jesaya got out to study an unusual imprint across the track ahead. "A leopard has been here," he said, pointing at fresh paw prints either side of it. "This mark is where it has dragged its prey."

Deciding that it wasn't safe to follow the trail until later, he told us to mark the GPS position and radio in our discovery before we headed into the mountains as planned. Standing in the back of the jeep, I scanned the hillsides through binoculars, any thoughts of finding the leopard temporarily vanishing as we hurriedly recorded our sightings of potential leopard prey, from diminutive steenbok and common duiker, to warthogs and waterbuck. →

