



Burdened beast

Black rhinos are under threat from poachers, lions and hyenas. But one small bird is looking out for them.

ROAN PLOTZ WAS FORCED to make a desperate dash up an acacia tree during his first trip to Hluhluwe-Imfolozi Park, in South Africa, where he watched helplessly as his bags were skewered by a furious rhinoceros. “This kind of thing was a pretty regular occurrence for at least two years, to be honest,” Roan says. “Until I became better at tracking, I’d see their ears go up and my adrenalin would get going.” It wasn’t a warm welcome, but par for the course, says the Melbourne-based ecologist. Aside from being habitually aggressive, Roan’s chosen study subject is critically endangered. Its numbers have plummeted by a staggering 99.6 per cent, from an estimated 1 million in the 1850s to about 4500 today, with much of the decline due to the black market for horns. One of four rhino subspecies, the western black, was declared extinct in November last year.

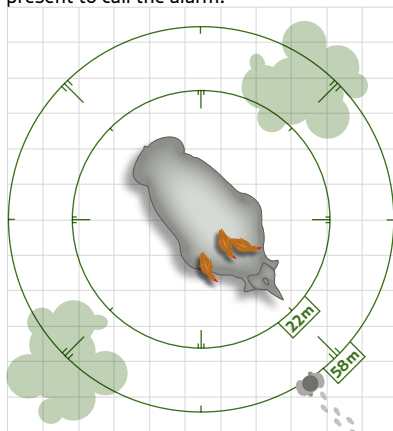
With funding from the Australian Geographic Society and working alongside PhD supervisor Dr Wayne Linklater, from Victoria University in Wellington, NZ, Roan is studying an unusual relationship the rhino has developed with a bird: the red-billed oxpecker. Oxpeckers are a common sight across Africa, picking ticks off at least 20 different host species. However, their favoured meal is blood straight from lesions caused by a parasitic roundworm on rhino flanks.

The question is: why do black rhinos appear to be the only host that tolerates this parasitism from the oxpeckers? A clue might be in the Swahili name for the



Early warning system

Researcher Roan Plotz found that rhinos typically became aware of the approach of a human on foot at 22m, but this increased to about 58m when oxpeckers were present to call the alarm.



Rhino population



oxpecker, which is *askari wa kifarua*, roughly translating to “the rhino’s guard”. Black rhinos are known to be incredibly short sighted, and the oxpeckers may be tolerated in return for calling the alarm when danger approaches (see left). To test this, Roan and park ranger Bom Ndwandwe put themselves in harm’s way, using a range-finder to measure how close they could get to rhinos on foot before being spotted. Their results showed that they were detected at about 22m when no oxpeckers were present and 58m when the oxpeckers were there.

However, Roan also noticed an even more interesting behaviour: when a rhino heard an oxpecker alarm call, it quickly orientated itself not to face him, but in the opposite direction to the wind. This is intriguing, he said, as poachers are the only rhino predators that consistently hunt from downwind. “We can’t be sure it’s human hunting that’s causing the response, a lot more research would be needed to ascertain that,” says Roan. We’re now applying for grant funding to study rhino responses to lions and hyenas, which are their only other predators.”



AG SOCIETY



Tagging along. Black rhinos (above left) and their red-billed oxpecker companions (above) are not easy to find, says Society-sponsored researcher Roan Plotz. To track them, he painlessly drilled holes (top) into the horns of 14 rhinos and inserted radio transmitters. "Rhino horns are made of hair, and grow like fingernails, so eventually the transmitters pop out," says Roan, who has studied the behaviour of 70 rhinos.



Fabulous frigatebirds

Help save these quirky and endangered birds.

CHRISTMAS ISLAND frigatebirds are endemic to this Indian Ocean island, but they roam more than 4000km away in a single flight to forage for food. Each lay just one egg per breeding season and are highly vulnerable to extinction. Breeding pairs on Christmas Island have suffered from a 66 per cent decline over the past three generations, and now there are about 1200. Threats include land clearing, dust fallout from phosphate mining, overfishing, marine pollution and the invasive yellow crazy ant, which is killing the island's dominant red crabs, affecting the island's ecosystem.

Now, the Australian Geographic Society will support BirdLife

Australia's Australasian Seabird Group to study the foraging behaviour of the species, helping to focus conservation efforts. "We want to establish more baseline data, especially on their feeding habits, which will help us to create cooperative management initiatives with our partners in Indonesia and other places the birds travel to," says Max Orchard, a project officer at Christmas Island National Park.

For more on the birds of Christmas and Cocos (Keeling) islands see page 62.

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