

Fraser - "We were on a rhino patrol at the time and I sensed a growing excitement amongst the rangers as we approached the crest of a hill. Sadly it was not a rhino they anticipated, but rather, word had it that the new phone tower was to be operational. They moved forward, glued to their phones, hoping for reception as they cleared the hill...."

Mobile phone network had reached the vast wilderness of Selous!

Communicating bush style

Crackle crackle crackle; "Can you repeat. Over."
"No, I'm not a rhinestone cowboy calling from the USA!
I asked you how the rhinos are doing today. DO YOU READ? Over." Crackle crackle, buzz, buzz.

Dr Kes Smith
Scientific Advisor, Selous Rhino Trust

And so it has been since radio-waves were discovered: the ubiquitous talking-louder-than-you-want-to, frustrated half-shout into a VHF radio, that is bush communication.

For many of us, the hiss of the radio handset conjures up the romance of remote wild places; a tremendous sense that you are alone, doing something important, a million miles away from traffic and technology and the modern world.

In 1984 we were working in Garamba National Park, Congo, protecting Northern white rhino, with support from SRI and others. Radio was our only means of communication. During that time, someone once made the mistake of testing the modern world, and sent an urgent package by DHL to our nearest town (only a day or two's drive away). It took 3 months! In the 1990s, satellite phones were introduced. They were the size of a substantial piece of luggage, with all the frustrations of trying to work out where on earth in the big African sky to point the dish to get some reception. Oh, and the cost!

But, here in 2008, gone are the days when the reason for not answering something immediately really was that the pigeon hadn't arrived yet, or the radio was on the blink. Mobile phone coverage is spreading like soft

butter into the wilds. You can now discuss what's happening on the Footsie 100 (as if we want to!) from under a tree in the Selous wilderness, and for those places that are remoter than remote, satellite phones are now pocket-sized, and have SMS facilities. These changes have taken some getting used to by some of us conservationists. But the benefits most certainly outweigh the negatives.

Communication is essential for our rhino conservation work in the Selous, for planning and coordinating activities, getting help or spares when things break down, and for reporting and generating rapid reactions to illegal activities, such as poaching. And although the VHF radio is still used much of the time and is the cheapest option, it does have its limitations.

So we are now looking at ways to use better technology to increase our response times, have more reliable and flexible connections, and improve safety. For example, we are now using mobile phones with SMS to improve communication between rangers in the field and the base station at Kidai. Fraser, the project's Technical Advisor, connects a small Thuraya satellite phone to a laptop computer for email in the Selous; unfortunately, it's an old temperamental and fragile laptop, and the project urgently needs another one.



At times when radio telemetry is justified, there is even communication with one's subject animals. In many cases using transmitters is very useful, especially if the animals are wide ranging, very cryptic in behaviour, or need better protection, as do the Selous' precious rhinos. Mobile phones are making a significant contribution to modern day animal transmitter tagging, and are now being tied in with mobile phone company sponsorship. With mobile phone coverage in the Selous becoming more widespread and cheaper every day, this technique could be incredibly useful to help us learn more about population dynamics, movements, and how to fine-tune our rhino conservation efforts.

So, in the Selous, we're fast moving into the 21st Century! What we now need is more satellite phones, improved hardware for internet and faster email connections, and more mobile phone handsets and base station radios. Satellite or mobile phone sponsorship could also be a great conservation contribution, if we consider a transmitter programme in the future.

Grant

Since April 2008, we have sent over £9,000 to the Selous Rhino Trust, made up of £5,000 from SRI's own core funds, together with further donations from Robin and Patrizia Cooke-Hurle, the Garrett and Mary Moran Family Foundation. Sir Matthew Goodwin's Charitable Trust, Dr The Hon A. and Mrs P. Todd, and the Townsend Family Foundation. We are about to send a similar amount again, made up of donations from Chatham/Worth Specialties, Chris Barlow and Cazenove+Loyd, and the sponsorship raised by Oliver Wilcox. These funds will go towards the salaries of Kes and Fraser Smith, one of the hardest aspects for which to fundraise. Our grateful thanks to everyone involved. Just in! Thank you Chester Zoo, which has awarded £8000 to Selous Rhino Trust.

Look who's talking

At Save the Rhino we strive to encourage and enable communication not just between ourselves and the field projects we support, but also between other conservation organisations. Our strap line "Connecting conservation and communities" speaks for itself. Even our magazine is a vital tool for explaining how all those valued donations, fundraising events and grants benefit *in situ* conservation projects we support. We have talked in this issue about the different forms of communication in rhino conservation, but I particularly wanted to explore how rhinos communicate with one another.

Lucy Boddam-Whetham
Office and Communications Manager

Rhinos are not renowned for their social interactions but on reading Anna Merz's book, *Rhino*, at the brink of extinction I soon realised that rhinos have quite a complex communication system, using body language, many different vocalisations, and urine and droppings to communicate danger, location and to try to settle territorial or other disputes. They also use a highly complicated method of regulated breathing to converse with one another.

Rhinos can be extremely vocal and have even been known to growl like a lion or trumpet like an elephant during a fight! A puffing snort or grunt is a common greeting, but they can also snort in anger and a shorter snort, coupled with an upright tail, is believed to mean alarm. This can lead on to a high-pitched "wunk" sound which communicates fear or even a high-pitched scream. Calves regularly make this wunk noise and will often squeal when seeking protection. It has also been witnessed that when a calf is threatened by a predator, the adult rhino will usually circle around the calf to protect it. Probably the most common rhino sound is a squeaking noise, believed to represent curiosity or slight alarm depending on the pitch. Calves make a higher pitched squeak when they lose their mother's scent. Contentment is thought to be expressed by a deep, resonant rumbling "mmwunk" sound. But perhaps the most intriguing communication trait of rhinos is that of the regulated breathing. Different breathing speeds can be used to communicate greetings, anxiety and, in turn, reassurance. It has also been suggested that rhinos produce infrasound signals.

In addition to vocalisations; body language is a large part of their communications repertoire. Touching or rubbing against each other is a friendly behaviour and can cement bonds; the young may also fling their heads in an invitation to play. Adults flatten their ears as a warning, which can lead into a full charge. As well as horn prodding; dominant black rhino males greet each other by repeatedly locking horns. The most frequent signals are based on scent. Urine spraying is very common, as is the use of dung as an information centre as to who is in the area. Females also use urine and droppings to indicate when they are in season.



The type and level of communications differs between the five species. The white rhino is most commonly found in small herds, but the black rhino and Greater one-horned rhino can also be found in social groups. Communication can also depend on the type of habitat the rhinos live in. Studies have shown that the Sumatran rhino is one of the more vocal species, perhaps due to the thick rainforest they inhabit. They have been recorded making distinct "eeps", "whales" and "whistleblows." Although the purposes of these sounds have not yet been clarified, they are most likely to convey danger warnings and location. Sumatran rhinos have also been seen twisting saplings that they do not eat, and it is believed that this might indicate a junction in a trail to other rhinos.

Through these observations, it is clear that rhinos have highly complex social behaviours. If anything, it reinforces the need to communicate the plight of the rhino, but maybe by using English, Swahili and Indonesian, leaving the squeaks, grunts and snorts to the rhinos!

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