

Field Projects coordinator, the African Wildlife Conservation Fund and coordinator of the Gonarezhou Predator Project.

Rosemary is a wildlife ecologist and conservationist who grew up in Zimbabwe. Rosemary earned her doctorate in zoology from the University of Bristol, (UK), and has 11 years of experience working on conservation-related research in Kenya, Botswana and Zimbabwe. Rosemary has been managing the AWCF field projects in south east Zimbabwe since 2008, and is employed by the Frankfurt Zoological Society to coordinate the Gonarezhou Predator Project.



Safaritalk interviews

Dr. Rosemary Groom

Rosemary invited Safaritalk members to submit questions about her work and the following interview features a selection of their questions and her answers. You can read the full interview at www.safaritalk.net.

How many wild dog packs do you estimate to occur in Gonarezhou and surrounds? Do you reckon that they have benefitted in some way from the “unnatural” low density of lions in the area or have all predators suffered from human factors on equal measure?

We know of at least 8 breeding packs in the park, but having only comprehensively surveyed about 2/3rds of the park to date, we believe there to be more than that – probably around 12 packs with just over 100 / 120 adults and yearlings. There is one pack of 16 dogs in neighbouring Malilangwe Reserve, 10 packs, (c. 75 adult/yearlings), in Savé Valley Conservancy and at least 2 large packs in Nuanetsi Wildlife Section to the west. I believe that the unnaturally low lion population has had a positive impact on the wild dog population to an extent, but I think the dogs will continue to do well there even as lions increase, so long as anthropogenic mortality is kept to a minimum. Because there is virtually no artificial water in Gonarezhou, lion territories are somewhat

restricted, thus leaving areas of the park with very low lion densities, where subordinate predators such as cheetah and wild dogs can still thrive. Wild dogs have, however, also been subject to anthropogenic mortality in the past, particularly snaring, but not to the same degree as lions, which were impacted as well by high legal, (trophy hunting), offtakes around the park.

What is your estimate for the cheetah population both in Gonarezhou and Mana Pools, (where I’m told they do exist but difficult to find)?

Cheetah are very difficult to survey using the techniques standardly used for other large carnivores, (camera traps, call ups or spoor surveys), so without a dedicated effort to find cheetah play trees and do some kind of mark recapture exercise or genetic analysis, I would be reluctant to put too much weight on our figures. However, our last survey, (Sept 2013), gave an estimate of 108 cheetah in the park, which is a relatively healthy population for

“I think the dogs will continue to do well there even as lions increase.”

"Wild dogs are at serious risk from poachers' snares set for other species."

cheetah, which is a naturally low density, wide-ranging species. This population estimate equates to a density of 2.2 cheetah / 100km², which, although lower than some other population estimates, is also significantly higher than many estimates which average out at about 1.0 cheetah / 100km², (IUCN / SSC 2009). The important thing, however, is that the population has been increasing in recent years, (although it may be starting to level off now). Cheetah are in fact seen relatively often in Gonarezhou, particularly on the road along the top of the cliffs on the south bank of the Runde River. They are sighted at Mabalauta, (Buffalo Bend area) as well.

The Cheetah Conservation Project Zimbabwe, (CCPZ), estimates the cheetah population at 10-15 adult cheetahs in Mana Pools.

What are some of your biggest poaching challenges in Gonarezhou and Save Valley? Can give a description of some of these challenges you've faced in recent years, (maybe even with examples?), along the Mozambique border and elsewhere?

I'm not sure if this question relates to the wild dogs specifically or to wildlife in general. Wild dogs are not actually targeted by poachers for any reason. They are not used as a protein source, their skins and other body parts have no commercial value and there is not even a local medicinal use for them, (although I have heard it said that if poachers feed their, (domestic), dogs the nose of a wild dog they will be better hunters!). However, wild dogs are at serious risk from poachers' snares set for other species, (as by-catch effectively). In Savé Valley, almost 40% of adult mortality, (of carcasses with known cause of death), and 8% of pup mortality is due to snares. We don't have exact figures for that in Gonarezhou but we have an indication of the scale of the problem from the rate of mortality of our collared dogs in snares, which have been quite high, especially along the Mozambique boundary of the park. For example, in the last couple of years we have put collars on four dogs in three packs that operate along

the boundary area. Two of those collared dogs, (from two different packs), were killed in snares within less than a year of being collared, (of course other dogs are being killed too, but we only tend to find the carcasses of the collared ones). But the great work by the Gonarezhou Conservation Project, (Frankfurt Zoological Society and Parks and Wildlife Management Authority), is reducing this threat considerably through their antipoaching efforts.

Where are we today in terms of genetic studies on wild dogs and what do you see happening in the near future in terms of answers to some unsolved questions, etc?

A recent genetic study on wild dogs, (published in *Molecular Ecology* by Marsden et al (2012)), used data from 13 sites across Africa. It showed the most genetic diversity from the transboundary population that includes Hwange National Park and the Okavango Delta, and least from our study area, the Zimbabwean lowveld, and the Laikipia population in East Africa. The same study also suggested a lack of genetic connectivity between the Zimbabwean lowveld and the southern Kruger National Park. Whilst this is potentially cause for concern, the sample size from the Zim lowveld was extremely small and from only a few different packs, (I collected all the lowveld samples myself), and so further investigation is needed before we jump to drastic conclusions about inbreeding and start interfering by moving dogs around.

AWCF is therefore working on a 3 year study with a very large sample size to see if there is indeed worryingly low genetic connectivity and or inbreeding evident in the lowveld. We are also collaborating with the Endangered Wildlife Trust who have collected genetic samples from Kruger to further investigate the issue of connectivity, (or lack thereof), between Gonarezhou and Kruger. Once we have the results of these studies we'll be able to make a plan as to what needs to be done next.

With regard to darting for research purposes: how does this affect future behaviour



1. The Chilojo Pack of wild dogs in Gonarezhou National Park.

2. African wild dog pup killed in a snare.

3. Wire snares are a big threat to African wild dogs. Here Rosemary removes a snare from a member of the Splitters Pack, SVC.

4. Rosemary loading a dart gun.

5. AWCF scouts, Misheck, Rueben and Cain, help a lot with local antipoaching initiatives.

6. Save Valley Conservancy is a stunningly beautiful area with the Big 5. This photo of 13 lions was taken on Bedford Ranch.

"With wild dogs, we have rarely noticed a change in behaviour of recently darted animals."

of a specific animal around humans? How would darting affect a solitary animal, i.e., leopard, compared to a pack animal such as wild dogs?

We use a combination of drugs called Ketamine and Medetomidine to dart wild dogs and other large carnivores. Ketamine has an anaesthetic and analgesic effect on carnivores and Medetomidine is both a sedative and an analgesic. The analgesic properties mean the animal experiences minimal or no pain during the procedure. Ketamine also has some amnesiac properties, meaning the animal does not remember much of the procedure on awakening.

As such, with wild dogs, we have rarely noticed a change in behaviour of recently darted animals. In some very few cases, we have noticed *the rest* of the wild dog pack may be a bit more twitchy after we've darted one of the members, but not the darted animal itself. This effect disappears after a day or two and does not usually extend to humans in general, but just to the same kind of situation as the darting was done in, (i.e., someone trying to approach very closely in a vehicle/on a motorbike).

I have not done a lot of darting of solitary carnivores, (except to help a friend who has then done the monitoring), but in my limited experience, so long as the procedure is kept short and quiet there is little effect on behaviour around humans even in the immediate future.

When darting an animal in a pack, so we'll use dogs as the example, how do you decide which animal to dart, and during the course of a year's study, how many times would you dart that particular animal?

The choice of animal to dart would depend on what you want to achieve from the collar. My only rule is that I will not dart an alpha female. This is for two reasons; most importantly, if anything should go wrong it would be a significant impact on the pack, (much more so than any other individual), and secondly you get very little information on the pack's movements dur-

-ing the denning season, because the alpha female remains at the den most of the time.

If the collar is a GPS or Satellite collar, which are heavier than simple VHF collars, we just try to fit them to the biggest dogs in the packs, (often, but not always, males). If you are trying to investigate connectivity and dispersal routes, you'll need to target the c. 1.5 / 2 year old males, (the most likely dispersers). If you are just trying to fit a small VHF collar onto the pack so you are able to locate it for monitoring, so long as it's a grown dog, (adult or yearling), I tend to dart whichever individual obliges me with a clean shot at its rump!

It is very unlikely that I would dart an animal more than once in a year unless he/she had a snare or other serious injury that needed treating. The collar signals last for several years, (if fitted to an adult they often outlive the dog), so there is little need to keep darting a dog to replace or remove a collar.

Is it necessary to collar predators other than to track them? Are collared predators at a disadvantage for survival?

I do not believe that collared predators are at a disadvantage for survival. If I did, we certainly would not be collaring wild dogs! We have no evidence that collars have any negative impact on fitness in our study population – dogs collared as 'normal' pack members have become alphas, dogs collared as alphas, (males), have retained alpha status, and we do not see a higher rate of mortality of collared dogs. Of course we tend to find carcasses of collared dogs much more often, because the collar signal leads us to the carcass, but un-collared dogs die/disappear at the same rate.

There are many reasons for collaring predators. The most obvious ones are to be able to find them to monitor them, both for research purposes, (pack sizes, mortality data, litter sizes, pack composition etc), and for welfare – i.e., to pick up on snares or other injuries, as well as for movement information. If using GPS or sat-

-ellite collars, they can give you information on movement patterns that you would never otherwise know about, (especially for wide ranging species like wild dogs!). Collars can be used to help see what routes dispersing animals take to disperse, (to help you know what areas need to be protected as corridors), and how certain interferences affect the movements of individuals/packs. Some collars are designed to be reflective to help prevent road kill at night and some are 'anti-snare' collars which can help prevent wire tightening around the neck when the animal is caught in the snare. As mentioned before as well, collar data can alert us of snare lines, or of areas that a species considers unsafe, even though to us it looks fine. This can then be investigated.

How have the local community's attitudes to wild dogs changed since AWCF was set up?

This is difficult to determine without having collected data or conducted a survey to consider people's responses to the species before AWCF started working here. Our local attachment student, Sydney Dube, will however be carrying out a survey later this year, (in communities around the Savé Valley Conservancy), to look at people's attitudes to wild dogs in areas where our program is active and where it isn't, (amongst other things). That will tell us if we are succeeding in making a difference or not. It will also help us to see what areas we need to focus on with our community engagement work in the future, (e.g., addressing misperceptions, conflict mitigation, capacity building etc).

What we have noticed, however, is that communities with which we have had longstanding engagements, (e.g., Village 26 on the Western boundary of SVC), appear to be more tolerant of wild dogs, and our scouts are well known amongst the communities and serve as ambassadors for the species. Last year we had two packs denning right in the middle of community areas and, despite one or two incidences of livestock killings, the communities were generally tolerant of the animals and they finished

their denning season safely in those areas. We believe this is a good indication of the potential for communities to contribute to wild dog conservation.

How does AWCF involve the local community to get them engaged and invested in the well-being not only of the wildlife but also the conservation of the park itself?

We have an effective education and outreach initiative. Our education program was established in 2011/2012 and currently involves 123 primary schools, 84 within 10km of SVC boundaries and 39 within 15km of GNP boundaries. The education program is multi-faceted and includes a conservation awareness program, a literacy program, a mobile education unit and DVD program and a secondary school scholarship program. A large portion of our education materials focuses on the African wild dog with the aim of improving local communities' perceptions of the species. For example, dispelling the myth of wild dogs being a threat to humans, and practical advice on how to deal with wild dog encounters and safeguard livestock.

We meet and chat to groups of school children visiting SVC and are often invited to attend community functions. We use these social gatherings as an opportunity to instil an appreciation for wildlife and conservation in the local youth and engage with them on the future opportunities available to them and associated with wildlife areas, (trackers/scouts, camp chefs/managers, rangers, skilled labour etc.).

We also operate a mobile education unit around the Savé Valley Conservancy and are looking for funds to do the same around Gonarezhou. This is a very valuable tool for engaging with communities (not just students) and providing them with access to wildlife and conservation themed resources. We show educational DVDs and have Q&A sessions and the driver is a trained educator who can discuss options for human wildlife conflict, etc., educate them about the Park and generally engage them with the program.

"Our scouts are well known amongst the communities and serve as ambassadors for the species."

We are also going to be working on some livelihood improvement schemes around Gonarezhou National Park in collaboration with others, to try and ensure there are tangible benefits to the communities from the park and its wildlife.

Do you get a chance to recruit and involve the local communities in your work?

Yes, very much so. All of our field teams and education teams are local Zimbabweans, and we support a number of local students, at undergraduate, honours and masters level. We are invested in building local capacity and ensuring sustainable benefits, and as such employ almost exclusively local staff, have close affiliations with local universities and work closely with local communities and landowners.

We have already achieved a sound level of capacity amongst our team members; our scouts are ambassadors for African wild dogs and extremely capable of running field-monitoring aspects on their own. All team members have the capacity to work independently and previous affiliated students have shown their commitment to 'the cause' by expressing a desire to rejoin the AWCF team at a managerial level and continue to affect conservation change within the Zimbabwean Lowveld, particularly for African wild dogs.

We also involve the local communities and local schools extensively through our education and awareness programs.



Do you think the Save Conservancy could be an attractive photo tourism destination in terms of its wildlife densities, variety, scenic beauty and tourist infrastructure? And if so, are any efforts being made by the conservancy to bring in photo tourists - especially with the dogs being such a big draw and with such good Big 5 representation in the conservancy itself?

Absolutely yes! The Savé Valley Conservancy is genuinely one of the most beautiful areas in Africa, and it certainly has sufficient wildlife densities, variety, scenic beauty and tourist infrastructure. The problem is not the place it's the tourists! Unfortunately the photographic tourism industry is extremely fickle and bookings tend to disappear at the first sign of any trouble in the country. With the, (generally), negative media coverage of Zimbabwe, the political instability, and the general distrust of the governing regime, making a business from tourism is unfortunately not economically viable at the moment.

Even so, the conservancy members are trying extremely hard to diversify and attract eco/photo tourists, but for the most part it's only the local market that comes and the income isn't sufficient to support the huge costs that come with protecting and managing these large wild areas. But if things change, with the abundance and diversity of amazing wildlife, and the opportunities provided by viewing wild dogs at the dens, there is certainly good potential for this.

This is an excerpt from Rosemary's interview on Safaritalk. Continue reading at www.safaritalk.net.

To discover more about The African Wildlife Conservation Fund and its conservation objectives, visit AWCF's website at

www.africanwildlifeconservationfund.org

"The Savé Valley Conservancy is genuinely one of the most beautiful areas in Africa."