

BVA Overseas Travel Scholarship Report :

Primate medicine at the Limbe Wildlife Centre in Cameroon

The Pan African Sanctuaries alliance (PASA), an umbrella organisation representing those working with rescued primates on the continent, has member sanctuaries in 11 countries. Between them they care for almost 800 chimpanzees (common and pygmy) as well as hundreds of other apes and monkeys. Whilst the bushmeat trade remains buoyant and logging concessions penetrate further into the Congo basin wilderness, the supply of orphaned, diseased and humanised baby primates will continue. It isn't difficult to appreciate the magnitude of the task undertaken by the sanctuaries, especially when you consider that the number of incoming animals far outweighs the few who make it onto release programmes each year.

With the help of the BVA overseas group I was able to spend a month at the Limbe Wildlife Centre in southern Cameroon. Over fifty chimpanzees, thirteen western lowland gorillas, one cross-river gorilla and various other indigenous primates are accommodated within the grounds of a former zoo.

Beside one of the large chimpanzee enclosures sits a small, thickly rusted box on four legs – one of the cages left behind when the zoo was closed and a stark reminder of the progress that has been made. Most of the animals are brought in as babies or juveniles after confiscation by the police or wildlife officials and



Tinu and baby Adjibolo playing in their enclosure

require a huge amount of care. Dehydration, emaciation and long-term malnutrition are unfortunately consistent themes amongst the new arrivals necessitating complex short and long term treatment.

I was there primarily to carry out a prevalence study of two gastrointestinal protozoa, under investigation as possible causes of diarrhoea in debilitated or otherwise susceptible individuals. Over the course of the previous three years certain gorillas had suffered episodes of severe diarrhoea, vomiting and depression which appeared associated

with the presence of large numbers of *Blastocystis hominis*, *Dientamoeba fragilis* or *Balantidium coli* in fresh and stained faecal preparations. Debate has grumbled on for decades about the pathogenicity of the former two organisms. Some investigators believe them to be causal in many cases of human irritable bowel syndrome. Others think they are simply commensals and of no clinical relevance. They are not routinely found in the faeces of wild primates and so their presence in animals habituated and exposed to humans is of interest from that perspective.

My job was to take three serial faecal samples from each gorilla at the LWC and two from each gorilla keeper and member of the veterinary team to evaluate the distribution of infection. This involved looking at a



Western lowland gorilla (*Gorilla gorilla gorilla*)

fresh saline preparation immediately after sample collection followed by a fixed smear stained with Field's stain. Each stained smear was screened in full on the 100x objective and the parasite load quantified on a +→+++++ scale. I had little experience of this sort of work and identifying the protozoa we were interested in when they were so variable in appearance was not always straightforward. Probably one of the highlights was finding out that I had the highest burden of both *D. fragilis* and *B. hominis* of any animal or human sampled.

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At this point I would like to mention what a huge privilege it was to be able to work with such incredible animals. I had some experience of primate work before I went having spent a couple of months as a keeper at a similar centre in Thailand, but I had never been close to a chimp or gorilla. They are obviously renowned for their complex social and emotional lives and problem solving abilities but it took a while in their company for them to relax around me and for me to grasp what I was seeing when they interacted with each other. It was



Maos, a baby chimp at feeding time

heartbreaking, for instance, to watch one of the male chimps, Jack, beg the vet not to dart him by holding out his hand in a conciliatory gesture and 'smiling'. I had also heard that chimps laugh, and remember writing

about it in an essay on comparative behaviour in my zoology degree, but to actually tickle a baby chimp and see it chuckle was fantastic. I understand that these experiences are windows into their behaviour gained in unfortunate circumstances – there should be no need to interact with them on this sort of level – but it was hugely affecting to see.

Returning to the main thread of the story, there were ample opportunities to gain experience of primate veterinary care when my sampling and slide processing was done for the day. I was able to help with 20 gorilla or chimp anaesthetics, wound treatments, basic laboratory diagnostics (all done manually – malaria screening, haematology, bacterial culture and faecal analysis) and was able to introduce Bobendina, the baby Preuss monkey living at our house, to the adult group. There were many elements of the work that required the same skills as those learned for domestic animal practice, but also proficiencies and considerations more allied with human medicine.

As an aside, and to illustrate the diversity of the work done at the LWC, I would like to describe the story of the centre's parrot flock. One method of illegally capturing large numbers of African grey parrots and other valuable birds is to coat a roosting tree with superglue whilst its occupants are off foraging. When the parrots land they are stuck until the poachers come and pull them off. (If you have ever read the Roald Dahl book 'The Twits' this will be a familiar technique). The LWC received a consignment of 1200 parrots that had been trapped in this way and confiscated on their way to Nigeria for sale. Those that could be released were examined and taken to a safe site to be freed. The majority, however, had crudely clipped wings and would not survive if left. These were treated for internal and external parasites and quarantined for 6 months before being anaesthetised to allow the stumps of their clipped flight feathers to be pulled out. I was able to help with the last batch of 40 parrots which we then released onto an island in the river running through the sanctuary. This was a 'soft' release as they have food provided and shelter from the elements and certain predators but when their primaries grow back they will be free to go.



The vets and keepers at the LWC, and at all the similar centres in Africa, are working extremely hard in difficult conditions. Conservation means different things to different people and there are certainly those who would favour focusing on the fate of the remaining wild apes rather than

those in captivity. It is very hard to accept that perspective, however, when you are faced with bushmeat orphans, intensely individual creatures, who need a solution to their circumstances now. Some centres are developing release programmes in an attempt to work towards sustainability – many places are already overflowing with young animals



A male drill (Mandrillus leucophaeus)

that could be expected to live 50 years. It would be fantastic if some of the animals at the LWC could have the sort of quality of life the forest would afford them and they are intending to start their own programme in the next couple of years. This will entail a large amount of veterinary input as the risks of disease introduction and the need to carefully evaluate individuals proposed for release are both topics that need detailed thought. The LWC is also very involved in education work and has several full time education officers who visit school and run holiday camps to teach local children about their natural heritage.

I am inexpressibly grateful for the help I received to allow me to undertake this work. I would like to thank the BVA overseas group for their support and also the staff of the Limbe Wildlife Centre who were so keen to assist with the project and so welcoming towards me. If possible, I would also like to appeal to anybody who has any unwanted materials, particularly drugs, that they could donate to the centre to get in touch with me or the LWC directly (www.limbewildlife.org).

The foothills of Mount Cameroon seen from the road to the market

