

Project Update: January 2003

In January 2003 the team was awarded Continuation funds to carry its work further, involving microsatellite analysis.

Mr. Collins Ouma, the MSc student from Kenyatta University assigned to this project, has done a terrific job on the mitochondrial DNA (mtDNA) phase, with 70 samples from 4 populations in Kenya (Laikipia, Ruma, Naivasha, Nairobi), and two in Tanzania (Serengeti and Ngorongoro), sequenced for about 500 base pairs, including the extraction of DNA from dung to boost sample sizes. There may be a few more samples to add to this from Meru NP, where there are so few hartebeest left they are very hard to sample (Dr. Richard Kock is conducting a rinderpest survey there and might be able to obtain a few samples from a helicopter). We are currently analysing these results.

Despite the difficulties encountered - mostly related to doing DNA analysis 'in the field' in Africa, so far from the source of required chemicals, having to learn how to get DNA from dung, and acquiring the import permit for ruminant DNA from the USDA, which took 6 months and much correspondence, following 9/11, anthrax, foot and mouth etc - all the effort that went into creating a basic DNA lab at Mpala now has a product: results will show how the Laikipia and Ruma hartebeest differ genetically from each other, and from other hartebeest populations across Africa, at least for mtDNA.

While this kind of analysis is relatively straightforward in the developed world, we have shown we can do basic conservation genetics at Mpala for threatened species, non-invasively. It's very significant for Mpala, and indeed Kenya. Moreover, the data were available just in time for Collins Ouma to attend a course on Conservation Genetics in the US, where he is currently learning how to analyse DNA sequences using his own data. On the day before he left, Collins was showing two PI's with projects on zebras and wild dogs here at Mpala how to extract DNA from dung. To me, the fact that a Kenyan student was showing the professors how it's done adds a certain satisfaction - this is what Mpala should be all about!

Website: <http://www.nasm.si.edu/mpala>