

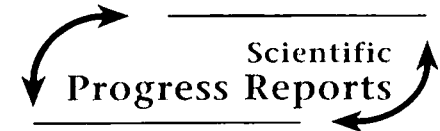
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Counting Rhinos From Dung: A Method to Estimate the Minimum Number of Animals Present in a Protected Area Using Microsatellite DNA

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We report a DNA-based method to estimate the minimum number of individuals in a population of black rhinoceros, *Diceros bicornis*, in a reserve in southern Tanzania. The number of individuals present in this population could not be determined by conventional means for a number of reasons. In this pilot study, total genomic DNA was extracted from dung samples collected in the reserve and polymorphic microsatellite DNA loci were amplified using the Polymerase Chain Reaction. Although very low amounts of DNA were extracted, positive amplification products were obtained from 60% of the dung samples. For the remaining samples, plant inhibitors co-extracted with the rhinoceros DNA prevented the amplification of the microsatellite loci. Nine unique genotypes were observed using polymorphic black rhinoceros specific primers. Preliminary results suggest that, although the technique is not as yet reproducible, it provides the basis for non-invasive and cost effective sampling of rare and endangered animals in the wild.



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A Research Update on Elephants and Rhinos

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