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MICROSATELLITE VARIATION IN THE SUMATRAN RHINO DICERORHINUS SUMATRENSIS

The Sumatran rhinoceros (Dicerorhinus sumatrensis) is critically endangered with less than 300 remaining. Here were report on microsatellite variation in the species and use this data to determine 1) if there is evidence of genetic differentiation between Malaysian and Indonesian populations of Sumatran rhinos at fast evolving microsatellite loci and 2) whether the first captive born calf in over 100 years was from highly related parents. Thirteen polymorphic di-nucleotide loci were cloned and optimized and variation was assayed at these loci in 17 captive animals - ten from Indonesia and seven from Malaysia. Across all animals the expected (Hardy Weinberg) heterozygosity at these loci was He number of alleles per locus evidence of microsatellite differentiation between Sumatran rhinos from the two countries with 5 of the 13 loci having at least one country specific allele. Of the 45 shared allele distance comparisons within Indonesian Sumatran Rhinos, the distance between the parents of the new born calf was lowest. This suggests these individuals were highly related and may partially explain why their five preceding pregnancies were lost within the first three months of conception.

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