

minerals that are in short supply in their diets by consuming soils from natural licks. As a consequence, natural licks may be a very important resource for lowland tapirs and other herbivore/frugivore species in the Yavari-Miri River.

Cytogenetic and Molecular Characterization of the Amazonian Tapir (*Tapirus terrestris aenygmaticus*)

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The Amazonian tapir (*Tapirus terrestris*) is the largest terrestrial mammal of the Neotropics. It performs important functions such as: seed dispersal and marking of footpaths that other animals use. There are four extant species of tapirs, three in the Neotropics of Central and South America and one in Southeast Asia. The species with the greatest distribution in Ecuador is the Amazonian Tapir (*Tapirus terrestris*) which has four subspecies, one of them, *Tapirus terrestris aenygmaticus*, is present in the Amazonian rainforest (Hershkovitz 1984). *Tapirus terrestris* is listed in the IUCN Red List of Threatened Species as Vulnerable, seriously threatened by extractive processes (lumber, oil industry and hunting). Its extinction would entail the alteration of the dynamics of the ecosystem it inhabits, and it would cause enormous damage to local populations that have traditionally depended on tapirs as a source of animal protein. Little research has been developed on the molecular genetics and cytogenetics of the four extant species of tapirs. Most of the studies have focused on monitoring wild populations to estimate density, home range, dispersal patterns and population genetic structure. Here, we undertake a preliminary study that aims to characterize *Tapirus terrestris aenygmaticus* subspecies using molecular biology and cytogenetics methods. This study is part of the plan to describe tapir genetic variation in distribution countries as recommended by the Tapir Action Plan (IUCN, 1997) and the Genetics Committee of the Tapir Specialist Group (Gonçalves da Silva, Sarria, Constantino & Medici 2004). Blood samples of four individuals were obtained in three localities of the Amazon region of Ecuador. The animals were chemically immobilized with a mixture of Xilazina (2 mg/kg de peso) and Ketamina (3 mg/kg) and the samples were taken in heparinized tubes and EDTA tubes. For the cytogenetic study, the samples were cultivated in RPMI 1640 culture medium for 72 hours and metaphases were analyzed in a phase contrast Carl Zeiss MC80DX microscope. The karyotype of one female was determined to be 80, XX by referring to the Ideogram of the Amazonian tapir proposed by Sarria (1999). Two pairs of submetacentric, six pairs of subtelocentric and 32 pairs of acrocentrics autosomal chromosomes were found. The sex chromosome pair was found to be submetacentric. Finally, we also determined the Centromeric Index and Relative Length. For the molecular study, DNA was extracted according to the protocols routinely used in the laboratory and PCRs were done using specific primers for the 12S mitochondrial DNA region (1.2 kb). The amplified products were run in 2% agarose gels. The second part of this study aims to sequence the PCR products to characterize the 12 S mitochondrial DNA regions. The characterized sequence can be used as a pattern for comparison with the three remaining subspecies of *Tapirus terrestris* using a molecular systematic approach.