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THE EFFECT OF LANDSCAPE FEATURES AND SOCIAL ORGANIZATION ON POPULATION GENETIC STRUCTURE OF FRANCOIS'S LANGUR

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François' langur (*Trachypithecus francoisi*) is an endangered species (IUCN, 2002) found in the forests of southern China and the border area with Vietnam. Less is known about its population genetics structure and the influencing factors, as well as the genetics base of intraspecies coat color variation. Here we report a phylogeographical and population genetics analysis in François' langur. DNA was extracted from blood, tissue and fecal samples of 182 wild individuals from 21 extant langur groups. We sequenced mitochondrial DNA from the control region (CR, 395bp) and cytochrome (cyt) b gene (550bp). Eighty six variable sites were observed and 35 CR haplotypes and 12 cytb haplotypes were defined. Haplotypes found in white-headed langur, one subspecies of François' langur, formed a monophyletic group which is divergent from other populations recently. Two rivers restricted the population of white-headed langur within a narrow area, which might be responding for the monophyletic evolution history and the unique coat color pattern. The distribution of haplotypes of François' langur (including white-headed langur) displayed local homogeneity, implying a strong population structure and genetic differentiation. It is suggested that the landscape features such as drainage pattern and habitat discontinuity and social organization of François' langur have contributed to the population structure.

Keywords: *Trachypithecus francoisi*, population genetic structure, landscape feature, social organization