"Modeling the Effects of Fragmented Habitats on Costa Rican Jaguar Populations"

by

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The jaguar (Panthera onca) is widely considered a keystone species of Costa Rican wildlife. However, in recent years, habitat loss, fragmentation, prey scarcity, and hunting pressure have all contributed to a drastic reduction in populations. This study aims to deterministically and stochastically model Costa Rican jaguar populations and investigate the effects of multi-patch environments on population dynamics. It is found that while migration between patches does not significantly increase overall population levels, it does seem to affect the jaguar subclass distribution by favoring migrating populations.