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Ocelots in mountain ecosystems: density and conservation in Talamanca.

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The knowledge of the population status of mammals conveys one of the critical bases for the planning of conservation strategies and management. Mountain ecosystems represent important habitats throughout the tropical region; nevertheless their ecology is not clear and the importance of their role in mammal conservation is still unknown. The present study consisted of the estimation of absolute density in the Talamanca region, Costa Rica using camera-trapping. A sampling was made between 1500 and 1800 masl during two months, between February and March of 2007. An array of 18 sampling sites were established, each with two cameras covering a minimum area of 40, 12 km^2. With a capture-recapture analysis a population of 9 ± 0,88 (IC=9-14) and 12 ± 2,61 (IC=10-22) individuals was estimated according to the model selected out of two possibilities. Buffers around the minimum convex polygon were generated between cameras using the data of the Mean Maximum Distance Moved (MMDM) and buffers from previous studies for density estimation. An average of 121,67 ± 49,93 km^2 of effective area was obtained. From these results densities were calculated obtaining an average of 9,93 ± 4 individuals per 100 sq km. It is estimated that Talamanca still represents an important habitat for the maintenance of these populations on the long term. The use of the methodology and its implications on conservation is discussed and parameters are established for the species conservation in the region based on density data.

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