

PUMA DENSITY IN TALAMANCA: MOUNTAIN HABITATS, ESTIMATION AND CONSERVATION OF LARGE FELIDS.

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Mountain habitats across the tropics represent threatened ecosystems that lodge important populations of a great variety of carnivores. The puma is distributed throughout the continent, but its ecology and conservation status is unknown for this type of habitats. The density of pumas (*Puma concolor*) using camera trapping was evaluated in the region of Talamanca, Costa Rica. Three camera arrays were settled between 2006 and 2007 covering elevations between 1500 and 2100 meters. Two arrays consisted of 10 sites (camera-trap locations) and an array of 30 sites all with two cameras by site, the minimum convex polygon of the arrays were of 3.92, 19.08 and 75.66 km² respectively. An abundance of 7 ± 1.3 (IC: 7-14), 5 ± 2.12 (33 IC=4-13) and ± 4.4 (IC=28-46) individuals was estimated respectively using CAPTURE. The data of Mean Maximum Distance Moved (MMDM) for each sampling, and the calculation of all together were used to construct the buffer areas and to estimate the effective area of sampling. An average area of 102.1 ± 84.70 km² was obtained for all the samplings varying from 27.6 to 267.37 km². An average of 16.32 ± 8.84 individuals per 100 km² was estimated varying from 4.30 to 44.01 individuals/100 km². The methodology still presents some statistical and logistical limitations for this type of habitats. The role of this type of habitat is discussed for the conservation of great felids in Costa Rica and the region as well as the methodological influence on the estimations: potential, limitations and considerations.

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