

The assumed, the virtual, and the real: Spectacled bear distribution in the central Andes of Colombia

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The Spectacled bear (*Tremarctos ornatus*) is the only bear in South America and the second largest Andean mammal in the Colombian Andes. Due to its size and habits, it has one of the largest habitat requirements of all species in the region. The Colombian National Parks Unit has recently declared the Spectacled bear as one of their focal species for conservation based on its assumed presence in the parks, and invited WCS to assist them in planning conservation activities for this species. As an initial step WCS quantified how much habitat is still available based on GIS models, and verified presence/absence of the species throughout some of the habitat patches identified in the GIS model. Our result shows great differences among the traditionally assumed distribution, the GIS model, and the reality on the ground regarding the size, shape and amplitude of the distribution. The habitat based GIS model is more fragmented than the traditionally assumed distribution, while the presence/absence surveys showed complete absence in certain patches that were assumed as habitat both traditionally and by the GIS model. Moreover, some areas that were not assumed as habitat by the GIS model had Spectacled bear presence. Apparently, the history of the sites regarding human intervention, habitat quality regardless of distance from human presence, and capability of dispersion of bears among habitat patches are important parameters to take into consideration when analyzing the presence of Andean bears in the Central Andes of Colombia.