

## Ecological Data on the Andean Bear (*Tremarctos ornatus*) in the Alto Chocó Reserve, Ecuador

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The Andean Bear (*Tremarctos ornatus*) is one of the least well-known species of the *Ursidae* bear family. Little is known about the ecology of the species, although it is in danger of extinction in Ecuador. The species is included in Appendix I of CITES and is considered endangered by the Red Book of Mammals of Ecuador.

The Alto Chocó Reserve is located on the flanks of the Cotacachi volcano, Imbabura Province, Ecuador. Between 1999 and 2001, I carried out an investigation in the cloud forest of the Reserve to obtain ecological data on the Andean Bear. I obtained this data through secondary sources of information.

Between December 1999 and July 2001, I observed 616 signs of indirect evidence left by Andean Bears, from which I collected 250 hair samples. These hair samples helped determine the low index of genetic variability ( $H = 0.27$ ) of the bear population in Ecuador. I also found 143 samples of scats, with a large proportion containing *suro* (*Chusquea* spp. - a plant species similar to bamboo): 40% of the samples contained only *suro* and 13% contained *suro* and fruits. Fruits are available throughout the whole year and are an important food source for Andean bears. However, *suro* is the primary resource in the diet and survival of wild bears in the Alto Chocó Reserve.

I recorded 137 marked trees of various species. In the *Brunelia* sp, I observed torn bark in 45% of marked trees in the secondary forests and 17% of marked trees in the managed forest. The bark of the *chuagalo* (*Calythranthes* sp) was used for rubbing or scratching in both secondary and managed forest. It appears that marking behavior is a system of communication for this species.

I found 63 signs of feeding. Of these, 74% corresponded to *suro* and 22% to the remains of Bromelia sp, particularly *Greigia* sp, *Pitcairnia* spp. and *Puya* sp. Bromelias represent the second greatest source of fiber in the bears' diet after *suro*.

I found 10 terrestrial and 3 arboreal platforms in the paths used by bears for their movements. The platforms generally were constructed next to sources of food such as maize fields and in trees with mature fruits. I registered only 6 trees which bears had climbed. This may be because there were not many fruit trees left to be harvested by bears in this area (a result of the heavy extraction of wood that has occurred in the Reserve). Finally, on four occasions, I personally observed bears in the forest and in maize fields in the Intag region. The bears did not attempt to attack during any of these encounters, confirming the timid and shy nature of this species.