

## ANDEAN BEAR PROJECT, ECUADOR

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The Andean Bear Project, Fundación Espíritu del Bosque, has been carrying out research in Ecuador to help determine appropriate conservation and management alternatives for the wild bear population. This research is undertaken in the Intag zone, northwestern Ecuador. We have radio tracked 8 wild Andean bears (4 females and 4 males) between September 2001 and January 2005. However, in February 2005, "Dolores" (an adult female) removed her radio-collar 28 months after tagging (the fine steel cable spacer disintegrated). Similarly, at the end of March, "Juanito" (an adult male) was recorded 22.5 km from his capture site with an "inactive" radio collar (we plan to investigate this in April). On the other hand, we caught and radio collared a sub adult female named "Fiona" at the beginning of April. We are currently radio tracking four bears, three females and one male. The radio collars do not appear to interfere with the reproductive behavior of the females since two radio-collared females, "Porraca" and "Amanda", have been observed with cubs.

A second research project is being carried out in northeastern Ecuador in the Cordillera Virgen Negra (near the Colombian border). This area contains a 12 km<sup>2</sup> forest fragment with two main habitats: upper montane forest and *frailejon* paramo (grassland-flat highlands). The Cordillera Virgen Negra is inhabited by endangered fauna species such as the Mountain paca, *Agouti taczanowskii* and Andean coati, *Nasua olivacea*. The Cordillera has become fragmented due to logging, burning and conversion of natural forests into crops (mainly potato).

Our research project in the Cordillera Virgen Negra was initially financed to stop bear attacks on cattle. However, we have also used the funds to study Andean bear ecology in this area. In February 2004 we captured and radio collared one adult male bear, "Andrés". After 10 months of tracking, the preliminary home range calculation for "Andrés", using 100% minimum convex polygon estimate, was 7,5 km<sup>2</sup>. This home range size is small in comparison with the data obtained in Intag for two male bears (108.6 km<sup>2</sup>). However, this can be explained by the fact that "Andrés" can cross into Colombia using a unique "bi-national" corridor. We cannot radio track "Andrés" in Colombia because the area is in a guerrilla zone. Additional home range size data will be obtained through the use of GPS collars. Previous observations suggest that the Andean bear in the Cordillera Negra depend on the *frailejon*, *Espeletia pycnophylla* ssp. *angelensis* for refuge, marking behavior and food (the bears eat the soft centre of the plant).

Further research planned for 2005 (funding permitting) is the release of three bears (two males and one female) of different ages in the cloud forest of the Yanahurco Hacienda (250 km<sup>2</sup>). The Hacienda is surrounded by the Antisana Reserve (1200 km<sup>2</sup>) and Cotopaxi National Park (330 km<sup>2</sup>). Our experience has shown that reintroduction success is dependant on releasing bears in a large and inaccessible area (such as offered by the Hacienda). This reintroduction will contribute to the conservation of the species in Ecuador, reinforce the natural bear population in northeastern Ecuador and reduce the loss of genetic diversity and consanguinity. At the same time, we will gain further information and bio-ecological understanding of this little known species.

The research in Cordillera Virgen Negra would not be possible without the support of Environmental Ministry of Ecuador, Carchi Provincial Government and the help of my field assistant Wilfrido Urresta, Dr. Mery Montesdeoca and Lic. Gabriela Montoya. This project is currently supported by small grants from Cleveland Metroparks Zoo, Salisbury Zoological Park, Clark Waldram Conservation Fund, an anonymous donations and volunteers.



*“Andrés”, caught in the frailejon paramo*  
Photo: Armando Castellanos



The Cordillera Virgen Negra study area,  
Ecuador

