

PRELIMINARY RESULTS OF THREE-YEAR TELEMETRY STUDY OF ANDEAN BEAR IN THE INTAG REGION, ECUADOR.

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Probably the Andean bear, *Tremarctos ornatus*, is one of the least well-known species of the *Ursidae* family. Little is known about the habitat use, activity patterns and home range of this species, although it is in danger of extinction in Ecuador. The few studies carried out on this species are based mainly on the analysis of secondary information, such tracks, scats, tree markings and tree nests. This lack of information has seriously impeded efforts to develop scientifically sound conservation strategies for the species in Ecuador. Obtaining direct information about Andean bears in the wild must be given utmost priority to develop better conservation strategies for the species.

This paper presents preliminary results from a radio-telemetry study of this species in a fragmented landscape in the Intag region, northwestern Ecuador. This is an on-going study. The results presented refer to the preliminary study of six bears (4 females and 2 males) that were captured using “Iznachi” traps and outfitted with motion-sensitive transmitter collars. The bears were radio tracked between September 2001 and July 2004.

Home range sizes were estimated from 1336 locations, using 100% minimum convex polygon estimate. Preliminary results show that the females have small and “established” home ranges. The average home range for females (n=4) was 28.95 km².

Conversely, male bears moved widely and rapidly over large, often inaccessible areas. The average home range for males (n=2) was 108.6 km². Male bears use movement corridors, especially along ravines (two males traveled an average of 18.75 km from their capture sites). These movements allow males to link bear populations that are isolated by large distances, but may bring them into conflict with local farming communities.

Much intraspecific tolerance was indicated among bears in this study due to extensive home range overlap

The activity patterns were calculated from 3923 readings. The bears were more active during the day than at night. Activity was highest throughout daylight hours (06H00 to 18H30), declined after sunset, and was lowest between 02H00 and 05H00. The bears did not appear to have long periods of deep sleep during the nocturnal period, requiring short naps during the day (usually between 10H00 and 15H00).

The data obtained from this study is vital for a better understanding of the behavior, environmental requirements and ecological role of this species. The data should help environmental authorities and NGOs make appropriate decisions in relation to programs of environmental education, handling of bear-related problems in local communities, and the creation and design of protected natural areas and wildlife corridors.