Andean (Spectacled) Bear Research at Alto Choco

The research we are doing currently at Alto Choco is part of ongoing work to save the Andean Bear. The research is led by Armando Castellanos, and is based at the Alto Choco Reserve in Northern Ecuador (although the bears do not respect Reserve boundaries and are often located in surrounding areas). The Alto Choco Reserve is one of four Reserves managed by Fundacion Zoobreviven.

Background

The Andean Bear is the only bear living in South America. It is found in a narrow strip running from western Venezuela through the Andes in Columbia, Ecuador, Peru, and Bolivia, and ending in Northern Argentina. It is a ¨vulnerable¨ species, endangered mostly by habitat fragmentation caused by livestock farming and logging. In the past, shooting these bears was common, but this activity is now illegal.

The bears are omnivorous, but eat mostly suro, bromeliads, and fruits. They will kill and eat small animals, and there have been incidents of bears attacking cows in other parts of Ecuador. The males are about twice as big as females, reaching 1.3 – 2.1 meters (4´4¨- - 6´8¨) standing on 2 feet and weighing 130-180Kg (285-400lbs).

We don`t know much about reproduction in the wild. Females in captivity begin to reproduce around 4 to 5 years of age. The gestation period varies from 160 to 255 days and they have 1 to 4 babies at a time, usually 2. Cubs are about 18 cm (7 inches) and weigh about 300-500 grams (10-17 ounces). They open their eyes at about 42 days, and 3 months from birth they can follow their mothers. The male adults occassionally accompany the family group but this is unusual. Cubs accompany their mothers for more than a year.

Andean Bears are very timid, and are afraid of people. There has never been a report of a Spectacled Bear attacking a person. If they see you they will turn around and run or climb the nearest tree.

They are very good swimmers. They can jump from tree to the ground when cornered. They have very sensitive sense of smell, but their vision is not very good. They communicate by sound. They also make scratch marks on trees, tear off bark, and scratch their backs on certain types of trees. Any of these behaviors could also be a type of communication.

The Andean Bear is relatively solitary, but there have been reports of a number of bears eating in a cornfield or a carcass. They make long journeys using paths generally located on mountain peaks.

Research

In the past, Armando reintroduced 7 captive bears to the wild: four here at Alto Choco and three at the Maquipicuna Reserve. These reintroduction programs are finished, and we are not tracking any of the reintroduced bears now, except Martìn. Martìn is living an ongoing saga, which you can read in the separate paper about him.

The purpose of the current research is to learn about activity patterns and use of habitat of wild bears. This data can then be compared with that collected from the reintroduced bears. The information learned about the bears in this research will improve future rehabilitation projects both here in Ecuador and through out South America. The project is staffed by three professionals: Armando, Gustavo, and Alberto, who supervise the work of volunteers.

This research is being conducted using direct methods. Four wild bears (three females and one male) have been collared with radio telemetry devices. The researchers are trying to catch a couple more. Researchers learn about diet from excrement and record marking behavior. However, they do not rely on reading signs (tracks, scratches, and marks) to draw conclusions about the bears` activity. Instead, they measure the actual location and activity of each bear.

We track activity patterns by listening to the signals from the collars. It is simply active or inactive. It does not tell us what kind of activity the bear is engaging in or whether it is moving from place to place. The collar will register active if the bear is moving her head, scratching, shaking, eating, etc.

We track location by taking bearings from specific stations, which have been located by GSP. Using mapping software, it is possible to triangulate to determine the exact location of the animal. We can tell the specific types of habitats used by the bears, as well as those not chosen, by comparing this data with a satellite image of the area. Thus, we can learn their preferences by analyzing the choices made. We can also measure the Home Range and Core Area of each bear.

Long Term Goals

Fundacion Zoobreviven works closely with surrounding communities to identify community needs, bring needed services to the communities, and create economic opportunities. At the same time, the Foundation has ongoing environmental education projects, to reduce hostility toward the bears and increase the value of the bears in the minds of local residents.

The Foundation is also working with other local NGOs to expand protected areas in the vicinity of the Reserve. By learning more about the wild bears, this research will help conservationists make better decisions regarding which territories should be protected, as well as improving future reintroduction projects.

These strategies together will maximize the chances that these bears can continue living in the mountains that they have always called home.