Projecto Puma: Studying and conserving puma and jaguar in Brazil

Marcelo Mazzolli, Projecto Puma, R. Cristiano Brascher, 2080, Bairro Sta Helena, 88504-301 Lages – SC BRAZIL
marcelo@projeto-puma.org

Projecto Puma was born as a research project in 1988 from the need to investigate the sudden livestock depredation that had been repeatedly reported, but so far unchecked, by environmental agencies in southern Brazil. Apparently the 'timber cycle' of native forest extraction from 1940 to 1980 had left deep scars in the land, a legacy that included local extinctions and retraction of wildlife to a few secure refuges. After that, it was acknowledged by the government that the Atlantic Forest was one of the most endangered forests in the world, and it finally received full protection status that is still in effect. Although not officially monitored, a wildlife comeback was witnessed in some of the areas that had not been urbanized. Puma, which had been virtually absent from the extensive native grasslands of southern Brazilian tablelands, found the ecosystem occupied by herds of sheep numbering in the hundreds. Sheep herds very soon were reduced to what could fit in corrals during the night, a measure that guaranteed a fairly sustainable business—today herds are not found grazing unattended as they were in the past. Apparently we witnessed risk-avoidance behaviour, as puma would continually attack an unattended herd for several days or even weeks, while corralled livestock were only occasionally taken. Other evidence of risk-aversion was obtained from the higher frequency of puma approaching households during periods of intense drizzle and fog conditions.

We inferred that the risk and fear of attacking a herd near a household would only be counterweighted by a stronger force stemming from a reduction in prey availability in the environment. The fact that most attacks to livestock occurred during winter, when prey availability was lower, corroborated this hypothesis. These useful findings were incorporated in guidelines for environmental restoration. Also during our research the puma's spreading distribution was recorded in 'real time' from depredation incidents, which were gradually reaching areas that had not had such incidents before. Today there is a community-based partnership to provide technical assistance to reduce livestock losses and also to reduce illegal harvesting of puma.

In 1993, Projecto Puma became a non-profit organization as a means to broaden its initial scope and actions, with the aim of promoting conservation based on sound science. Since then, research focus has been on determinants of puma and jaguar distribution in southern Brazil. Two main projects are currently being undertaken, one in the tablelands that resulted in a preliminarily comparison of mammalian assemblages from different land use systems, and one in the coastal rainforest, aiming to maintain and restore relict populations of jaguars. We found puma to be quite persistent and still widespread in the tablelands and able to survive in large-scale, private landscapes that are covered with as little as 10% of native forest intermingled either with native grasslands or with exotic forest plantations. A loss of environmental integrity had taken place anyway —mammals such as the giant-anteater, the maned-wolf, the tapir, and the white-lipped peccary are isolated and scattered in few remaining refugia. Reduction in the availability of prey, landscape modifications, and active persecution have caused the decline of the Atlantic Forest jaguar, which today may be considered severely threatened with extinction (Fig. 1).

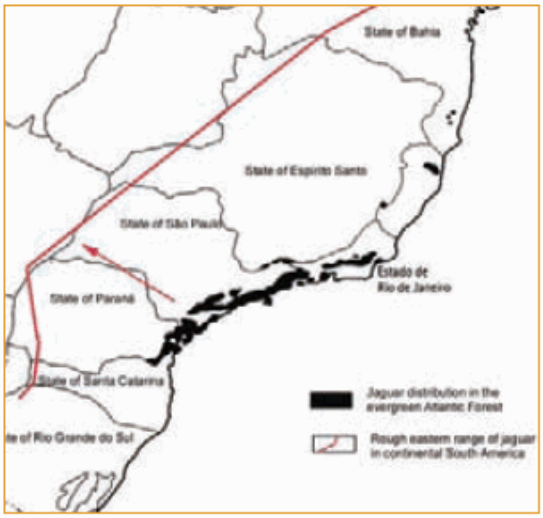

Figure 1. Jaguars in Brazil's Atlantic Coast Forest are isolated by several hundred kilometers from continental populations. Continental range roughly drawn from Sanderson et al. (2002); Map, but not jaguar range, slightly modified from Leite & Galvão (2002).

Figure 2. Logo of the volunteer expedition initiative, stating 'untamed territory program' at the top

Projecto Puma has initiated volunteer research expeditions to the coast forest with the support of Biosphere Expeditions, and has created a network of information on puma and jaguar presence in the area. The initiative designed a logo (Fig. 2), and published its first report in which jaguar and puma habitats were preliminarily evaluated (available for download on the website). The expedition recorded a reduced availability of prey for the large cats, and identified that illegal harvesting of palm heart needed to be restrained for wildlife restoration. Harvesters act illegally, poaching while remaining in the forest for several days until a sizable crop is collected. Today Projecto Puma is searching for international partnerships to establish a sustainable, much more profitable, and legal harvest of açaí fruit from the same palm tree. This will guarantee that harvesters, whose practice is currently illegal, participate in the construction of a new history of conservation success. The participation of volunteers in the research project was so gratifying that new jaguar expeditions to Brazil will take place and expeditions addressing conservation needs of the last of the island tigers in Sumatra are being planned in partnership with local Indonesian institutions. §

On the web: *http://uniplac.net/~puma/*