

Puma and Jaguar Predation in South-Eastern Brazil

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Little information is available today on shifts in big cat behaviour near human settlements, and of livestock and predator interaction resulting from this proximity. What we have today seems to be a by-product of basic ecological studies. An unstudied jaguar population still survives in some areas of southern Brazil. Projeto Puma has raised information on livestock depredation by pumas in the southeast. Our results shed some preliminary light on aspects of puma and livestock interaction, and, as expected, have generated many more questions than answers. We compared livestock losses on 15 farms in southern Brazil. Cattle were present on 12 farms, and, although pumas in this area are able to kill calves up to two years of age, losses to other causes represented more than 12 times those to puma, or US\$ 23,545 compared to US\$ 1,886.

Goats were present on six farms, and losses to pumas represented US\$ 4,200, and other causes only US\$ 205. Sheep were present on 12 farms and losses to puma were US\$ 5,899 compared to US\$ 749 due to other causes. These data reveal that cattle losses to puma are small. In fact, much more ought to be done to achieve better cattle husbandry rather predator control. On the other hand, medium-sized livestock suffers

severe losses to puma depredation. However, cases analysed individually revealed that high losses affect unattended livestock. Sheep losses ranged from 14-84 percent in such situations, and only 0-6 percent on farms with animals penned close to habitations.

When puma attack free roaming flocks of sheep, several are brought down in a single attack, while penned animals near houses are taken in single units. Pumas may feel uncomfortable eating with dogs barking nearby. In one case sheep were penned 60 meters from the keeper's house, and the losses represented two animals out of 14. In another case, with sheep penned beside the main house, losses represented only one out of 37 sheep.

Other patterns of predation also suggest that puma will attack when human activity is less frequent. In a total of 37 puma predation records, 41 per cent occurred in winter, when it is cold, misty and rainy, 30 per cent in spring, 24 per cent in autumn, and only five per cent in summer. Also they attack more frequently during rainy (n=7) rather than good weather (n=4), and during the night (n=11) than during the day (n=1).

There is no government compensation for livestock depredation and puma and jaguar are killed by ranchers despite

protective legislation. However, law enforcement has grown in southern Brazil and hunting pressure seem to have decreased in some areas.

Jaguars have been practically extirpated from the two southernmost states of Brazil, Santa Catarina and Rio Grande do Sul, where up to the 1900's they were still found on the Atlantic shore. In 1970, one was killed in mid-eastern Santa Catarina (Fig. 1-1), and between 1980 and 1990 a few were shot in the north-east (fig. 1-2), the southernmost range of a relict jaguar population. This unstudied jaguar population inhabits the Serra do Mar, a steep mountain chain covered with Atlantic Rain Forest (Mata Atlantica) that continues through the State of Paraná and up to São Paulo, a habitat that has been fairly undisturbed in several areas, mainly because of dense forest, high rainfall, difficult access, and mosquitos.

The little predation information we have from northeast Santa Catarina shows that jaguars take large cattle at an intensive rate, raising the anger of ranchers and spreading fear in the communities. Few jaguars are found in the northwest of Rio Grande do Sul at Turvo (Fig. 1-3), an eastern range limit for a population occupying adjacent countries.