

CONSIDERATION OF PROPOSALS FOR AMENDMENT OF APPENDICES I AND II

Proposals concerning export quotas for specimens of Appendix-I or -II species

A. Proposal

Request a quota for the export of trophies of the jaguar (*Panthera onca*), predator of cattle in Venezuela, a species included in Appendix I of CITES in accordance with Resolution Conf. 9.21 of November 1994. During the two years following approval of this proposal, Venezuela will not export trophies of this species. An annual quota of between 20 and 30 trophies is requested.

B: Proponent

Venezuela

C: Supporting Statement1. Taxonomy

1.1 Class		Mammalia
1.2 Order		Carnivora
1.3 Family		Felidae
1.4 Genus and species		<i>Panthera onca</i> Linnaeus, 1785
1.5 Scientific synonyms		-
1.6 Common names	Spanish	Yaguar Jaguar Yaguarté Onca Tigre Tigre americano Tigre mariposo
1.7 Code numbers		CITES A-112.007.002.003

2. Biological Parameters2.1 Distribution

This species is found from central Mexico to southern Brazil and northern Argentina (Swank and Teer, 1989). It lives in a variety of forest habitats including humid subtropical and tropical, semi-deciduous and deciduous thorn matorrales and woodlands as well as savanna and flood woodlands (Mondolfi and Hoogestijn, 1986).

Its distribution is contiguous throughout the Amazon basin in Brazil, Colombia, Ecuador, Peru and Venezuela. In Central America, its distribution is more fragmented than in South America.

In the specific case of Venezuela north of the Orinoco-Meta rivers, jaguar populations are fragmented to varying degree. Some populations are considered isolated, especially in the Eastern Cordillera and in some parts of the Llanos Orientales. South of the Orinoco-Meta rivers, in the thick and extensive tropical forests of the states of Amazonas and Bolívar, the jaguar's survival is free from any significant threat in the foreseeable future.

2.2 Habitat availability

Based on a survey of the forested areas in each of the states (*Atlas de Vegetación de Venezuela*, 1985) and using an estimated average rate of deforestation, the loss of forest throughout Venezuela until 1996 was determined.

The total area of Venezuela is 91,516,900 hectares of which 46,690,450 were estimated to be forested in 1980. If the annual rate of deforestation is 1.76 percent, then the total forest area in Venezuela would be 33,566,189 hectares in 1996; in other words, 37 percent of Venezuela is estimated to be forested in 1996 (*Atlas de Vegetación de Venezuela*, 1985).

Humid tropical forest and combinations of it with Amazon catinga, gallery forests and mangroves are the types of forest used in this analysis. The area of national parks is included, assuming deforestation in the parks to be the same as in the rest of the country. In reality, this is not the true situation.

Forest cover in 1996 is estimated, therefore, to represent 37 percent of the total territory of which approximately 28 million hectares of forests are in the states of Amazonas and Bolívar, south of the Orinoco River where tropical rain forests comprise 85 percent of the total forest area in Venezuela.

2.3 Population status

In the forested areas of the Yucatán Peninsula of Mexico and Guatemala and in all of the Amazon Basin including Brazil, Colombia and Venezuela, jaguar populations are considered to be stable and in some cases are increasing, whereas in the rest of its range, populations are recorded as being reduced or very reduced (Swank and Teer, 1989).

Populations of this species have been studied using an estimate of the territory used by an individual jaguar and extrapolating this to the total area of available habitat. Studies are limited both in number and in geographical coverage because of the difficulties of surveying this species.

The following studies provide important information: Schaller and Crawshaw, 1980; Schaller et al., 1984; Quigley, 1988; Crawshaw and Quigley, 1991; Rabinowitz and Nottingham, 1986; and Aranda, 1992.

Hoogesteijn et al. (1986) estimated the abundance of the jaguar in Venezuela based on forest area and the density of the species reported by several studies. Using this method, these authors arrived at the existence of 2500 to 3000 jaguars in all of Venezuela.

A study of this species based on estimates for the area of potential habitat was carried out by PROFAUNA, a service of the Venezuelan Ministry of the Environment and Renewable Natural Resources (reported by the Dirección de Manejo de Fauna Silvestre, 1995).

Based on an estimate of the present forest area in all the states of Venezuela except Nueva Esparta and using a weighted average territory for male jaguars (several authors; Table 2), of one jaguar per 4,150 hectares, the probable number of individuals in each state gives a hypothetical total of 5,271 male jaguars in all of Venezuela including the states of Amazonas and Bolívar where jaguar populations are based on a territory of 10,000 hectares, typical of the tropical forest (Smith, 1976).

In order to allow a reasonable margin of error in the calculations, the number of probable male jaguars was estimated using the density for all of Venezuela, projected by Smith (1976) for the Brazilian tropical forest, of one jaguar per 10,000 hectares. This study uses the largest territory attributed to this species. With this data, the number of estimated individuals reaches 3,847, a figure closer to, although still larger than, the estimate by Hoogesteijn et al., (1986).

Table 1: The theoretical number of jaguars (*Panthera onca*) in Venezuela.

These figures may be considered an underestimate of the jaguar population, because in calculating the species's population based on available habitat, it is assumed that all individuals are adult males with extensive male territorial requirements. If we take into account that there are one or two females in each male's territory (Schaller and Crawshaw, 1980; Rabinowitz and Nottingham, 1986), it is reasonable to conclude that jaguars in Venezuela are underestimated.

Furthermore, PROFAUNA analyzed reports from ranchers in all of the country reporting jaguar attacks on cattle. Between January 1994 and March 1996, 48 reports were received in the offices of PROFAUNA, primarily from the eastern plains, but also from the Andean foothills and south of the Orinoco, thus showing that the problem of jaguars preying on cattle extends throughout Venezuela (See table 2).

The high number of reported attacks, the equivalent of an average of 3.2 attacks per month, leads us to believe that jaguars may be more abundant than estimated, owing to its presence in territories with a variable number of attacks. In the areas of fewer reported attacks, attacks may be more frequent, but for obvious reasons they are not seen.

Table 2: Reported attacks by jaguars on cattle (1994-1996) (Source PROFAUNA)

Between August 1991 and July 1996, 147 surveys were made among ranchers in the states of Apure, Barinas, Cojedes, Guárico, Monagas, Portuguesa and Zulia, in order to obtain information about the presence of jaguars and the type and extent of damage attributable to this species.

Among the landowners and managers surveyed, 80 percent (118 respondents) declared having detected the presence of a jaguar during the 12 months preceding the survey, either by confirmed spottings, footprints, growling or loss of livestock. The remaining 20 percent did not report the presence of the jaguar or reported that the incident took place several years ago.

Out of the same group, 44 percent (65 respondents) declared having suffered cattle losses attributed to jaguars, while the remaining 55 percent did not report losses attributable to jaguars or declared that they were not certain of the cat species.

To the question whether in the past twelve months they had hunted jaguars on their land or nearby, 35 percent replied yes and 55 percent replied no; the remaining 10 percent gave no reply.

This data indicates that the species is fairly frequent in ranching habitats in Venezuela.

2.4 Population trends

By separating the individuals estimated in table 2 by the biogeographical regions, an estimate of Venezuelan jaguar populations was obtained (Table 3).

The estimated populations in the Eastern and Central Cordilleras are less abundant and geographically isolated. As a result, their long-term genetic survival is questionable. Nonetheless, they are found in widespread protected areas (P.N. Guatopo, Henry Pittier, El Avila). In the state of Zulia, populations are directly linked with those in Colombia; therefore, their isolation is less significant.

Populations south of the Orinoco are considered to be out of immediate danger of extinction. Perhaps the population that shows a tendency to decrease at an unknown rate is that in the Venezuelan Llanos,

owing to the loss of its forest habitat as well as the illegal hunting of jaguars regardless of whether or not they prey on cattle.

Table 3: Jaguar populations by biogeographical regions

2.6 Role of the species in its ecosystem

This species is the largest feline in the tropics and the predator at the top of the food chain in its range. According to a revised estimate made by Carrillo et al. (1994), more than 85 different species of prey are reported for the jaguar. The most important are the peccaries (*Pecari tajacu* and *Tayassu pecari*), several large rodents (*Agouti paca* and *Dasyprocta* spp.) and the reptiles *Caiman crocodylus*, *Geochelone* spp. and *Podocnemis* spp. (Rabinowitz and Nottingham, 1986; Emmons, 1987; Aranda, 1992; and Maffei, 1994). Given its status as a predator, the jaguar plays a key role in maintaining a balance in the food chain within its ecosystem.

2.7 Threats

The most important threats to this species throughout its range and in general in Venezuela are the loss and the breaking up of its habitat and the illegal hunting of individual animals, either because they are accused of harming cattle or simply because of the traditional aversion to this large cat.

3. Utilization and Trade

3.1 National utilization

Presently, the jaguar is not traded. The only reported sporadic use of this species is the use of its fur for magic and religious rites and the use of its claws, teeth and fat for supposed therapeutic qualities (Silva and Strahl, 1994). A small number of illegal hunters attempt to sell skins within Venezuela.

3.2 Legal international trade

At the present time, the jaguar is not legally traded in its area of distribution. From the mid-seventies at the time of the beginning of the export prohibition of cat furs for trade, as a result of its inclusion in Appendix I of CITES and the cooperation of the parties to CITES to restrict illegal trade, the number of hides available for illegal sale and their price on the black market have fallen drastically (Smith, 1976; Swank and Teer, 1989). Nonetheless, individuals continue to be killed for various reasons.

3.3 Illegal trade

There is no significant commercial demand for this species in Venezuela. As already mentioned, there is illegal hunting of individuals accused of killing cattle, and occasionally the skins of some of these individuals are sold to restaurants as decoration (reported by the Dirección de Vigilancia PROFAUNA).

3.4 Actual or potential trade impacts

The present request for an export quota of jaguar trophies does not imply the intention of permitting commercial trade in trophies of this animal.

The intention is to export only trophies resulting from the regulated hunting by foreign hunters of jaguars proven to be predators of cattle under strict supervision by PROFAUNA. A very small number of 20 to 30 animals a year is the number of potential exportable trophies.

3.5 Captive breeding or artificial propagation for commercial purposes

At the present time, there is no plan to breed this species in captivity for re-population. Several isolated cases of breeding are reported by Venezuelan zoologists, with whom a proposal is being discussed for the implementation of a conservation programme *ex situ* in order to preserve the genetic diversity of the species with the intention, if feasible, of later adding to diminished stocks.

PROFAUNA, in collaboration with the Fundación Nacional de Parques Zoológicos y Acuarios (FUNPZA), has negotiated the creation of breeding stock in several Venezuelan zoos using individuals whose origin is well documented in order to maintain *ex situ* genetic stock of this species.

4. Conservation and Management

4.1 Legal status

4.1.1 National

In January 1992, Venezuela passed an environmental law that establishes criminal sentences or fines for the hunting of protected species or those threatened with extinction.

The jaguar, along with some 30 other species of mammals and a number of birds, reptiles and amphibians, is included in presidential decree 1485 of 11 September 1996 which lists the animal species banned from hunting, published in the Gaceta Oficial of Venezuela number 36.059 on 7 October 1996. This law specifically excludes from the ban the hunting for scientific or regulatory purposes duly authorized by the Ministry for the Environment and Renewable Natural Resources through PROFAUNA.

This species is also included in the list of species threatened with extinction established by presidential decree 1486, dated 11 September 1996 and published in the Gaceta Oficial 36.062, dated 10 October 1996.

4.1.2 International

The proposed exportation of trophies resulting from management policies for harmful animals is subject to regulations established by CITES of which Venezuela is a party.

4.2 Species management

4.2.2 Habitat conservation

PROFAUNA is creating 31 wildlife reserves in several states in Venezuela. Twelve of these reserves have areas with the characteristics of this species's habitat and form a total of 18,000 square kilometres of wildlife protected area (Dirección de Áreas Naturales Protegidas PROFAUNA).

The programme of protected wildlife areas provides for protected areas serving as corridors between reserves and nearby national parks, in order to decrease as much as possible the effects of the

breakup of wildlife habitat, a consideration which is especially important for a large feline such as the jaguar. If the area of the national parks, 16 percent of Venezuela, is taken into account and the proper management of all the protected nature areas is guaranteed, the long term survival of the jaguar north of the Orinoco River is ensured.

In September 1993, Presidential Decree 3.022 was signed declaring that an area reserved for wildlife must be preserved and remain untouched on public and private lands for which forest exploitation permits are granted.

This reserve area must include forest ecosystems combined with other habitats such as grasslands, matorrales and flood plains. Depending on the total area of the property, between 10 and 20 percent of the land must be maintained as a wildlife reserve.

4.2.3 Management measures

Under the policy for sustainable use, the principal strategy adopted for the conservation of wildlife, there is an obvious need to exploit economically the species within a local framework and to instill an attitude favourable to the conservation of this species in benefit of both jaguars and humans.

This goal is not easy to attain, because the management of jaguars must deal with the reality of protecting jaguar populations, their prey and their habitat, while providing adequate protection of the property rights of the local human population.

In fulfilment of this policy, PROFAUNA began in 1993 a programme for the conservation and management of jaguars throughout Venezuela that includes a study of the problem of jaguars and pumas preying on cattle, a survey of available habitats for these species (especially the jaguar) and specific management actions in the event of damage to private property.

Several activities have been carried out since 1993, including a survey of feline populations throughout the country using a series of surveys and inspections to cattle ranches and a study of available habitat. The results have been mentioned in previous paragraphs of this proposal.

One of the several steps taken by PROFAUNA with respect to jaguars that have caused losses among cattle has been a programme that is now being carried out for the capture and transfer of predatory jaguars in the Venezuelan Llanos where this problem is greatest.

Before initiating any capture, a ranch owner must make a declaration to PROFAUNA, after which an inspection is made to the ranch to determine whether the damage is attributable to cats and of which species. Once losses have been confirmed, a study is made to identify the animal and to track it. The local population is interviewed in order to gather as much information as possible.

Between 1993 and the present, a total of 5 jaguars, one male and four females, have been captured and transported successfully and then monitored by radio in their new territories (reported by the Dirección de Manejo de Fauna Silvestre-PROFAUNA). One male and one female were released in the forested areas of the states of Guárico and Apure where, after an initial study, it was established that a sufficient number of natural prey are available. No incidents of preying on cattle have been reported. Interviews with local inhabitants near the sites of release confirm this. They have also not returned to their original territory where they were captured.

The main obstacle to continuing these activities, apart from the purely financial aspects, is the limited availability of habitat for the jaguar north of the Orinoco River. According to data on forest cover and rates of deforestation, there are theoretically 51,000 square kilometres of various types of forest available in 1996 of different degrees of fragmentation (Atlas de Vegetación de Venezuela, 1985).

The survival of the jaguar in northern Venezuela is not seriously threatened if this habitat is maintained, especially in light of its confirmed adaptability, its ability to survive and the number of protected nature areas. The relocation of a large number of jaguars to areas where the jaguar is already well established is not a viable long-term possibility.

4.3 Control measures

4.3.1 International trade

As a signatory to CITES, Venezuela can invoke other legal measures to regulate trade and to fight illegal trade in wildlife. Presently, there are no quotas for the export of jaguars in any country where it is found.

4.3.2 Domestic measures

PROFAUNA permanently carries out protection measures through a programme of checkpoints in states where the pressure of both legal and illegal hunting is greatest. In addition, frequent inspections and visits are made to regions where jaguars often prey on cattle, and permanent contact with cattle ranchers is maintained informing and advising them not to hunt jaguars illegally, but to inform PROFAUNA, the agency responsible for controlling wildlife. PROFAUNA is the defender of the public's interest in both administrative and penal procedures related to the illegal use of wildlife.

5. Other Comments

In light of these circumstances, PROFAUNA recognizes the need to regulate the hunting of predator jaguars in areas where this problem is serious and recurrent. The hunting of jaguars who have killed is proposed in order to prevent efficiently illegal and indiscriminate hunting by landowners and to improve tolerance for the presence of jaguars not responsible for the loss of cattle.

Owing to the fact that protection laws alone are frequently ineffective to guarantee the survival of the jaguar in populated areas, as was well documented in the case of the Asiatic tiger (*Pantera tigris*) (Jackson, 1996), alternative and additional methods must be sought in order to ensure that humans and jaguars coexist in greatest possible harmony.

When this potential resource is not exploited, people tend to take the law into their own hands and eliminate the jaguar without any real benefit. The standing aversion of people to jaguars usually leads to their killing with no distinction between predators and inoffensive animals.

In these cases, a strategy is used to motivate and encourage landowners to preserve present wildlife areas and to protect jaguar populations while giving landowners an opportunity to obtain additional economic benefits through the sustained use of the jaguars on their land.

The two main options using this strategy are the use of tourism and the sport hunting of jaguars that specifically cause damage. Tourism is difficult, although not impossible, to organize in the case of this species owing to the characteristics of its habitat and its evasive behaviour with regard to humans.

The second option consists in finding a direct way to eliminate a local problem and to obtain compensation for damages. Taking into account that a trophy hunter spends considerably more money than the average ecological tourist (Makombe, 1994, cited in Jackson, 1996), this option could provide additional revenue for the government in support of its management and conservation policies for this species.

Swank and Teer (1991) propose for Venezuela and the rest of Latin America a strategy of limited and tightly controlled sport hunting of problematic jaguars as a source of revenue for the implementation of the government's management plans and to compensate partially the local population for losses and for cooperation with this plan.

A number of African countries permit sport hunting and the export of feline trophies (lions, leopards and cheetahs), using the hunting of confirmed predators. The revenue obtained from this activity constitutes an economic resource that will allow and encourage the maintenance of large feline populations (Jackson, 1996).

All these considerations lead us to believe that a selective plan of sport hunting used as a carefully planned and rigorously enforced control method is a viable option and is even desirable. It can make a significant

contribution to the specific conservation of jaguar populations, and in general to all of the feline species found in the livestock raising areas of the country.

6. References

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