



## Status of the Iberian lynx

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The Iberian lynx (*Lynx pardinus*) was recently designated by IUCN as ‘critically endangered’ and is presently considered the most endangered felid species on our planet. This lynx was previously common in many regions throughout the Iberian Peninsula, but during the second half of last century it rapidly declined, mainly due to an intense human persecution and the destruction of its main habitat, the Mediterranean maquis. A census in the 1980’s indicated that only 800 to 1000 individuals, distributed between nine isolated and distinct subpopulations, remained. Concurrently, the early effects of myxomatosis – an epidemic disease that decimated wild rabbit populations, began taking a toll throughout the Iberian Peninsula. Rabbits constitute more than 90% of a lynx regular diet.

### Worsened situation

During the last years the Iberian lynx situation has worsened. *Hemorrhagic viral pneumonia* – another rabbit epizootic disease – destroyed, once more, numerous wild rabbit populations on the peninsula. The construction of new infrastructures such as roads, railways or dams, has contributed to loss and fragmentation of habitat. Even now, when the species is strictly protected, there are a few cases of animals being trapped or shot by poachers. The most common cause of lynx mortality is now traffic accidents. Young, dispersing individuals, searching to establish a territory of their own are the most affected. Data from the 1990’s suggested not only an alarming drop in the numbers, but also the complete extinction of some populations. The number of ‘survivors’ at this time was estimated to be around 600 individuals.

### Two remaining populations

In February 1999, Spain approved the National Strategy for the Conservation of the Iberian Lynx. In 2000, Spain and Portugal reached an agreement to carry out a coordinated census in all the areas where the Iberian lynx had been present in the 1980’s. Photo-trapping techniques and genetic analyses of fecal samples were used in this census. The results, two years later, were appalling: the Iberian lynx was extinct in Portugal and in various regions of Spain and only two viable populations remained. Both populations were in Andalusia: ‘Doñana’, considered to support between 24 and 33 individuals, and no more than eight breeding females; and ‘Sierra Morena’, an area comprised by the Natural Parks of *Andújar* and *Cardena-Montoro*, with an estimated population of between 60 and 110 individuals, including between 18 and 23 reproductive females.

Recent results from intensive surveys indicate that lynx numbers in the two remaining populations have stabilised. It is estimated that there are slightly more than a hundred lynxes of reproductive age and approximately another hundred cubs and juveniles. Last year, 2004, was a good for lynx reproduction, with a total of 31 to 37 cubs born in Doñana and Sierra Morena.

### Conservation strategies

Until these recent data there was no clear picture on how dramatic the decline of the Iberian lynx has actually been and, due to the lack of consensus between stakeholders, conservation agencies have lost valuable time in reacting to the situation. In Spain, the responsibility over wildlife conservation lays within the Autonomic Regions, whereas more widespread national policies are the responsibility of the Ministry of the Environment. During the last decades, all the responsible administrations have been developing conservation strategies to prevent further decline of the Iberian lynx. However, these strategies were not strong enough or appropriately coordinated to prevent further decline of the species. This lack of coordination between administrations became a serious obstacle to many conservation initiatives. But the extremely critical situation of the lynx finally prompted the political will to resolve past conflicts and to forge cooperative agreements between administrations (see page 29). Funding for lynx conservation efforts has also greatly improved in recent years. A current example is the latest Iberian Lynx Life Project given to Andalusia, through which the Andalusian Government, the Ministry of the Environment, as well as several other administrations and NGOs have dedicated €9,285,00 to Iberian lynx recovery efforts.

**Prevent non-natural mortality**

*In situ* conservation strategies have focused on various fronts, with special emphasis on improving available habitat, increasing rabbit populations, and controlling rabbit diseases that are major factors in rabbit decline and thus, in lynx decline. The Andalusian Government has established agreements with landowners in order to prevent rabbit hunting activities in areas where lynx still survive. Concurrently, there are several new measures to prevent non-natural mortality, such as increased surveillance of lynx habitat to discourage use of leg-hold traps, snares, and/or poison. Road underpasses for lynx and other fauna in all ‘problem roads’ are being created, and road signs prompting drivers to decrease speed in areas where lynx thrive are being increased. Additionally, the Life Project has promoted a strong outreach campaign, focusing on areas surrounding the last two Iberian lynx wild populations.

**Captive breeding programme**

Despite the various recommendations to initiate a captive breeding programme for the Iberian lynx, it was difficult to reach an administrative agreement that would push this initiative forward. In 1999, the Ministry of the Environment organised a workshop that was helpful in developing the Iberian Lynx Captive Breeding Action Plan. This plan was approved in February 2001 by the National Commission for Nature Conservation in Spain. Presently, the various actions included in the Action Plan are being carried out by the Iberian Lynx Captive Breeding Committee, a multidisciplinary group of professionals with several *ad hoc* advisors. The committee has four Advisory Groups: husbandry, genetics, health issues, and reproduction/biological resources bank. Each group has a representative that coordinates the group’s tasks and reports progress to the committee.

The Iberian Lynx *Ex situ* Conservation Programme has been established within the framework of a Memorandum of Agreement (MoA) between the Ministry of Environment and the Andalusian Government. This programme uses the Iberian Lynx Captive Breeding Action Plan as its ‘road map’, and its main objectives are:

- to breed Iberian lynxes in captivity in order to conserve 85% of the genetic variability presently existing in nature for a period of thirty years;
- to breed Iberian lynxes in order to create new populations of this species throughout its historical distribution area;
- to manage a unified *ex situ* conservation programme, with a single national direction, advised by a Captive Breeding Committee modelled after EEPs;
- to incorporate new Captive Breeding Centres, giving participation priority to those regions of Spain and Portugal with suitable habitat for potential future releases;
- to promote evaluation, restoration, and protection of suitable lynx habitat for potential future releases.

**Jerez Zoo’s role**

Since the beginning, Jerez Zoo has played a prominent role in the Iberian lynx captive breeding programme. In 2001, a litter of four cubs was found in Doñana; one cub was dead and another was dehydrated and hypothermic. It was agreed that the weak cub should be immediately

transferred to Jerez Zoo for hand-rearing. ‘Esperanza’ was raised at the zoo until she was five months old and transferred to El Acebuche Breeding Centre, where ‘Morena’, a ten-year-old female was also kept. This success coupled with in general limited survival capabilities of the weakest cubs in large litters, led to the idea that hand-rearing weak cubs could be a possible way of adding founders to the captive breeding programme without taking a toll on the wild population. Thus two additional cubs from large litters – one from the Doñana population and the other from Sierra Morena – where ‘taken’ from the wild for the captive programme in 2002. Both cubs were raised at Jerez Zoo. However, since no formal agreement had been yet established between the relevant administrations, the inclusion of new lynxes into the breeding programme progressed very slowly and with considerable hurdles. Three lynxes were found injured in the wild in 2003: only one, ‘Cromo’, was designated as a potential founder of a future breeding population at the El Acebuche Breeding Centre.

**Important impetus**

Finally, in the summer of 2003, a MoA signed by the Ministry of Environment and the Andalusian Government gave an important impetus to the captive breeding programme. Under this MoA, both administrations selected the director for the Iberian Lynx *Ex situ* Conservation Programme, whose responsibilities include coordination of a national captive breeding programme and management of the El Acebuche captive breeding facility in Doñana’s National Park. Following the agreement, the Andalusian government agreed to capture new founders for the breeding programme, and in December 2003 ‘Garfio’, an adult male captured in Sierra Morena, was obtained. Garfio was placed with Esperanza during the 2004 breeding season, but was not acclimated yet to the captive environment, and the pair did not mate. Throughout autumn of 2004, four new cubs were captured for the captive breeding programme: three females from Sierra Morena and a male from Doñana. Presently, the captive breeding pool constitutes 13 (5,8) Iberian lynxes, of which ten are in El Acebuche and three at Jerez Zoo. Last January, four of the adult females at El Acebuche entered oestrous and copulated with three of the males, so we are hopeful that this spring the captive breeding programme will yield its first cubs. ●

**28 March 2005  
First cubs within the programme!**

Three Iberian lynx cubs were born in the El Acebuche Breeding Centre in Doñana National Park on 28 March 2005. They are the first cubs of the world’s most endangered feline to be born in captivity. More information on this exciting news will be published in the Births and Hatchings section of EAZA News 51.

