

## **On recent actions undertaken for the conservation of the Iberian lynx in Spain**

by *Alejandro Rodríguez, Miguel Delibes and Pablo Ferreras*

Department of Applied Biology, Estación Biológica de Doñana, CSIC

Avda. María Luisa s/n, 41013 Sevilla, SPAIN

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After the thorough process of discussion on the successive drafts of the Action Plan for the Conservation of the Iberian lynx in Europe, whose final stage was the meeting held in Slovakia in October 1998, a definitive Action Plan has been produced under the auspices of the Large Carnivore Initiative for Europe. Further, this Plan is being considered for endorsement by European institutions. Since 1998 the course of conservation action has proceeded in some fields. In the present document we outline the main advances during this period in the implementation of conservation measures which agree with those considered in the Action Plan. We also discuss some shortcomings that, in our opinion, hinder the development of important actions.

### **1. Coordination of lynx conservation**

The Spanish Lynx Working Group of the Wild Fauna and Flora National Committee is today the forum where administrative decisions concerning the conservation of the Iberian lynx are debated and coordinated. The Lynx Group is chaired by a member of the Spanish Ministry of the Environment and gathers representatives of the Regional Governments (abbreviated RG henceforth). We think that such a group should be complemented by a consultive board in which researchers, conservation experts, NGOs and external consultants will discuss and produce recommendations from a purely technical standpoint. The Lynx Group has taken three important steps in accordance with the Action Plan:

- a. the preparation of a Spanish Strategy for the Conservation of the Iberian lynx, which was approved in 1999 by the National Commission for the Conservation of Biodiversity (i.e. the immediately upper level of political decision with regard to the Wild Fauna and Flora National Committee). This strategy offers a set of recommendations aligned with goals and actions considered in the Action Plan. This document, as the product of consensus within the National Commission, has influence but not legal value, because conservation action is restricted to RG.
- b. the designation in 1999 of a person responsible to promote the contents of the Strategy and facilitate the collaboration between RG; this person has been hired by the Ministry of Environment.
- c. the incorporation of representatives of the Portuguese administration as permanent members of the Lynx Group since February 2000. This will hopefully lead to an improved coordination of policy proposals affecting lynx in both countries as well as coordinated transborder management of international populations.

One problem with the National Strategy for the Conservation of the Iberian lynx deals with its ambiguity. The Strategy itself is merely a framework: whereas it contains a list of actions, these are not ranked according to their relative priority. It does not consider a time schedule neither allocates specific financial resources to particular programs or tasks. Whereas the Strategy was the result of an agreement between all administrations involved, the competence for lynx conservation is in the only hands of the regions. RG should claim for the important role laws attribute to them and take the initiative for conservation action, complementing the otherwise stimulating leadership that the Ministry of Environment has played while launching both the Strategy and the Lynx Group.

Since the Spanish laws appoint conservation duties to RG, the really important advances in administrative commitment with *in situ* conservation measures should be made through Regional Recovery Plans. Some of these are under preparation or have already been written, but no one has been approved by the correspondent government. For instance, the Andalusian Recovery Plan was written in 1999 and is now being reviewed by the administration for legal consistency.

To some extent the roles of the Ministry of Environment and RG, as established by law, have been reversed in practice. The Ministry should encourage and coordinate while RG should execute conservation actions for the Iberian lynx, and not the other way round (see examples below). This change of roles may greatly limit the efficiency of conservation measures.

### **2. Habitat protection and restoration**

Little new has been done in this respect. Some RG spend a part of available resources allocated to lynx conservation in the maintenance of local patches of open land, often planted with cereal or pastures, which makes homogeneous scrubland tracts closer to the more patchy habitat requirements of lynx. The main advance in habitat protection will be in the declaration of new reserves, or the increase of restrictions in existing ones, within the Nature 2000 Network. However, there is a serious delay in the definition of "lynx area", the area where the long-term conservation plans should be applied. Currently, this undefinition creates problems to regional administrations when deciding which areas should be proposed as candidates for the Nature 2000 Network of reserves. In some cases, it is argued that the species is not present anymore or that the habitat has been altered in some way to exclude areas recently inhabited by lynx. Nevertheless, by thinking in this way one forgets that these areas (even if altered) are privileged as the most easily

restored for lynx natural recolonization or future reintroductions. In this regard, it is remarkable that at the moment the European Commission considers "insufficient" the list of 'Sites of Community Importance' (SCIs) presented by Spain, apparently because not enough area is included to guarantee the survival of the Iberian lynx, among other species.

One change that draws our attention is that, in accordance with the action 2.5 of the Action Plan, from this year on, in Extremadura the EIA studies require an additional favourable report from the Regional Conservation Agency, which hopefully will benefit the preservation of lynx habitats.

### **3. Recovery of rabbit populations**

The most important advance under this heading has been a new experience, again promoted by the Ministry of Environment through two NGOs (CBD-Habitat Foundation and ADENA-WWF): the agreement concerning land management between NGOs and several private owners in small areas of Eastern Toledo Mountains and Sierra Morena (some 3000 ha and 1000 ha, respectively). The area in Toledo Mountains harboured the second most important lynx population both in density and numbers, just before a drastic decline which started 15 years ago. The particular conditions of the agreement may vary from one owner to another, but in all cases there is an economical incentive attractive to owners (e.g. buying hunting rights during one or more seasons without hunting) and an assumed benefit for lynx habitat, especially the enhancement of rabbit populations. Protocols for this action have been based on a document with guidelines for game management in lynx areas. This document has been brought forward by ADENA-WWF and produced at the beginning of 2000.

### **4. Reduction of mortality causes**

The agreement between private owners and NGOs mentioned under action 3 is also aimed at promoting the owner's strict observance of regulations concerning traps and the complete avoidance of disturbing human activities. In areas containing lynx populations standard methods for predator control such as snares are now completely forbidden.

### **5. Public education and information**

During the last year, the Iberian lynx has remained highly ranked in the treatment that media devote to nature conservation issues. Several events around the Iberian lynx and its problems have drawn the attention of many journalists both in Spain and abroad. The press campaign explaining the Large Carnivore Initiative for Europe and the publication of an excellent book of lynx pictures can be cited among these events.

### **6. Habitat connection between isolated lynx populations**

The current discussion about the limits of the future SCIs, i.e. the elements of the Nature 2000 Network, will be crucial to satisfy the connectivity requirements between lynx populations. This is another point which underlines the importance of being generous in selecting the SCIs' boundaries having the recovery of Iberian lynx in mind (see also comments to action 2).

### **7. Reduction of the risk of inbreeding**

No measure has been taken.

### **8. Captive, semi-captive breeding, and reintroduction**

In the light of the results of the recent Portuguese survey (1994) and the last regional surveys in Spain (1995-1996), the possibility that the lynx has disappeared from many of the areas shown in the 1988 distribution map (see Action Plan, p. 40) has gained strength. Indeed, nowadays only there is proof that lynx still exists in some localities of Eastern Sierra Morena and the coastal plain of Doñana. Therefore, as a cautionary measure, the urgency to design and develop an experimental program of captive breeding has been stressed. In October 1999 researchers, technicians and representatives of the administrations met in a workshop held in Madrid, once again called by the Ministry of Environment. As a result, a detailed proposal of a Captive Breeding Plan for the Iberian lynx has been prepared. It contains objectives and actions regarding the establishment of priorities within the Plan, the management of captive animals, reproductive physiology, genetics and demography, health, reintroduction, and organizational aspects. The third draft of this document is now being discussed. So far, the main problems with this Captive Breeding Plan is that both the role of different institutions and the origin of financial resources for specific tasks and materials have not been adequately clarified.

Regarding action 8.4. of the Action Plan, a preliminary assessment of the Alcornocales Natural Park (Cádiz, S Spain) as a potential site for lynx reintroduction has been made in the framework of compensatory measures following the construction of a highway dissecting such potential lynx area.

### **9. Monitoring and research**

Actions undertaken for lynx conservation, both before and after the elaboration of the National Strategy and the LCIE Action Plan, have never been monitored at a technical level. These actions have been primarily funded by EU LIFE programs. Established administrative controls have been efficient in assuring that the amounts invested

corresponded to program goals (e.g. a given number of rabbit restocking attempts). However, assessing the real efficiency of these actions, in terms of measurable benefits for lynx populations has generally been neglected. Further, since these actions apparently have not changed the declining population trend of the Iberian lynx, a crucial question is "why not?". Obviously we need detailed information on the techniques and protocols used as well as on their effects on some ecological parameters expressing the lynx response. As this information has not been collected we have learned little despite the work done, and we are not in a better position to correct mistakes or to improve the benefits of future actions for the lynx. It is therefore extremely important that every conservation action will

- a. include enough funds in its budget for monitoring its biological efficiency, and
- b. define its objectives so that the success of the action could be determined by objective data (a vague definition would be e.g. "improve food abundance in the area", while a more testable one would be "increase rabbit density from 0.5 ind/km<sup>2</sup> to 0.9 ind/km<sup>2</sup>").

Under the auspices of the Andalusian Regional Government, important advances have been made in the development of an objective method to identify Iberian lynx remains (tissue contained in scats, hair, skin and so on). Mitochondrial-DNA markers specific for the Iberian lynx have been isolated. After several tests evaluating the probability of obtaining false positives due to factors such as scat age it has been concluded that this molecular technique has an almost complete diagnostic value. Besides, this method is affordable and quick to perform, thereby applicable to large scale surveys. Therefore, soon it will be possible to draw a new lynx distribution map based on objective data. Individual identity could also be recognized both through DNA analysis and camera-traps baited with lynx urine. These can be used to estimate population size at smaller spatial scales.

New knowledge on lynx habitat requirements has been recently published: specifically a comparison of habitat characteristics of lynx just before dispersal, during dispersal, and just after settlement, and a description of the features of breeding dens. Two more studies have addressed the interspecific relationships (mostly exploitative and interference competition) between Iberian lynx and Egyptian mongoose, red fox, and Eurasian badger. Other contributions include a list of intestinal parasites in a lynx population living in Sierra Morena, and a description of one death attributed to tuberculosis in the Doñana area.

#### **10. Estimated current population trend**

In spite of the efforts summarized above the status of the Iberian lynx is more and more worrying. There is indication that most populations are still declining, and could locally be close to extinction. For instance, intensive trapping (with both cameras and real traps) has been performed in several areas of Toledo Mountains and Sierra Morena without positive results. Preliminary results of DNA analyses indicate that scats collected by volunteers in many localities can not be attributed to the Iberian lynx. Sightings or other indirect evidence are becoming rare in areas where they were not some ten years ago. All this information suggests that increased efficiency in conservation action is now more needed than ever.