

**Welcome** to the third edition of *LynxBrief*, a monthly briefing paper focusing on the conservation of the Iberian Lynx, **the most endangered big cat species in the world**. As suggested by several recipients of *LynxBrief*, example letters will soon be provided on the SOS Lynx website ([www.soslynx.org](http://www.soslynx.org)) concerning issues raised each month, to facilitate lobbying. Comments on any issue related to the Iberian Lynx can be sent as usual to: [lynxbrief@yahoo.co.uk](mailto:lynxbrief@yahoo.co.uk)

## Contents

Successful Captive Breeding.....	1
Planning Lynx Recovery.....	2
Lynx Monitoring.....	3
Map of Natura 2000 proposal in Spain.....	4

## Successful Captive Breeding

On 28 March 2005, we all received the excellent news that the Captive Breeding Programme (co-ordinated by the Spanish and Andalusian Governments) has had its first success with the birth of 3 cubs: two females (Brecina and Brisa) and one male (Brezo). The parents are 3-year-old Saliega and 4-year-old Garfio, both born in the wild in the Sierra Morena.



Saliega and Garfio. Photo: Ex Situ Conservation Programme

*LynxBrief* congratulates all those working in Captive Breeding, under the direction of Dr Astrid Vargas, for their important work and achievement, and looks forward to more good news and success in the future. Current plans for the Captive Breeding Programme envisage increasing the captive population to around 70 by 2010, through more captive breeding and the incorporation of more wild founder individuals. Reintroductions might then be possible.



Brecina, Brezo and Brisa. Photo: Ex-situ conservation programme

The Captive Breeding Programme involves a main centre at El Acebuche, Doñana (Spanish Environment Ministry) and an associate centre at Zoo Jerez. A new, larger centre is being constructed by the Junta de Andalucía in Jaén, not far from the lynx population in Andújar-Cardena. It is hoped that additional breeding centres can be also incorporated in other areas, for example in Extremadura, Castilla-La Mancha and Portugal, to reduce risks inherent in captive breeding (such as disease) and maintain the *Iberian* character of the species.

The Captive Breeding Programme is subject to strict protocols governing the treatment and possible future reintroduction of captive animals, and is being developed in close collaboration with *in situ* conservation efforts. For more details see:

[http://www.juntadeandalucia.es/medioambiente/LIFE\\_lince/fondoc/IIseminario/docs/Programa\\_Exsitu.pdf](http://www.juntadeandalucia.es/medioambiente/LIFE_lince/fondoc/IIseminario/docs/Programa_Exsitu.pdf)

Given that the Iberian Lynx is critically endangered, the Captive Breeding Programme is an important initiative with the potential to both increase the genetic diversity of the species and create new wild populations; through the reintroduction of captive bred individuals. However, in order for reintroductions to be possible it will be necessary to expand existing *in situ* conservation efforts and increase the planning of long term Iberian Lynx recovery, as discussed below.

## Planning Lynx Recovery

The Iberian Lynx is in critical danger of extinction (IUCN) and thus it is important to ensure the short-term survival of wild populations and develop a captive breeding programme. However, it is also important to plan for the future to allow short-



©Ex situ conservation programme

term successes to be turned into long-term lynx recovery. In particular it is important that sufficient Regional Recovery Plans and Natura 2000 areas are approved and implemented to cover all actual and potential Iberian Lynx areas.

## Regional Recovery Plans

Spanish Law (4/89) requires Spanish Regional Governments to approve and implement Recovery Plans for endangered species, such as the Iberian Lynx. These plans have legal status and need to address the ultimate causes of problems affecting the species. For the lynx, this would need to include: hunting, land use changes, road developments and rabbit diseases.

The Spanish regions of Extremadura and Castilla-La Mancha have already approved Regional Lynx Recovery Plans. However, rather surprisingly given its importance for the lynx, Andalucía has still not approved a Lynx Recovery Plan, despite having a draft plan produced for several years. It is very important that this draft plan is urgently politically approved to give the plan sufficient political support and legal weight to be implemented, particularly in the face of conflicting policies and interests such as problematic road developments and urbanisation. Once approved, the plan would also compliment and reinforce existing conservation projects and programmes.

The March edition of *LynxBrief*, urged individuals and organisations to write to the President of Andalucía to call on his government to urgently approve the draft Lynx Recovery Plan. Anyone who has not already done so should write to:

**Excmo. Sr Presidente de la Junta de Andalucía,  
Dr Manuel Chaves, Palacio de San Telmo,  
Avenida de Roma, 41071 Sevilla, SPAIN  
email: [manuel.chaves@juntadeandalucia.es](mailto:manuel.chaves@juntadeandalucia.es)**

**Latest news:** another lynx was runover on 23 April 2005 in the Sierra de Andújar. This sad news emphasises the importance of urgently approving an Iberian Lynx recovery plan in Andalucía.

Portugal is another key area, where a Lynx Recovery Plan has been drafted but not yet politically approved. It is important that this plan is politically approved so that it can be implemented, preparing areas in Portugal for long term lynx recovery, including the reintroduction of captive bred individuals. Those concerned about the need to approve the Portuguese Lynx Recovery Plan should write to:

**Exa. Dr. Francisco Nunes Correia,**  
**Ministro do Ambiente,**  
**do Ordenamento do Território e do Desenvolvimento Regional,**  
**Rua de “O Século” 51, 1200-433 Lisboa, PORTUGAL.**

## Natura 2000

The long-term aim of Iberian Lynx conservation is to recreate a viable and sustainable “metapopulation” of interconnected breeding populations. This will require not only the expansion of existing populations and the creation of new populations, but also the linking together of populations through continuous protected areas. This will not be easy, not least because many actual and potential lynx areas are under increasing pressure for urbanisation, agriculture and road developments. However, an important mechanism that should help safeguard a sufficient network of areas for the lynx has been provided by the EU’s Natura 2000 initiative.



Natura 2000 is an initiative set up by the EU to “preserve biodiversity by maintaining or restoring natural habitats of community [EU] importance”. Natura 2000 was created under the 1992 EU Habitats Directive, partly to protect areas important for “priority species” such as the Iberian Lynx. Natura 2000 areas will be protected through a system of contracts with local partners, and are eligible for additional EU funding for nature conservation (e.g. current LIFE funding).

See: <http://europa.eu.int/comm/environment/life/life/natura2000.htm>

Many important lynx areas have been included in the Spanish Natura 2000 proposal, as shown on page 4. However, as also shown on page 4, key areas between Doñana and Portugal and between the Sierra Morena and Montes de Toledo (where lynx have recently been detected: see page 3) have not been included in the proposal. Protecting and restoring at least a part of these areas will be important to allow the current lynx population in Doñana, and a restored population in Montes de Toledo, to be linked with populations along the Sierra Morena in the future. In addition, the area of “Viñas de Peñallana” (featured in the first edition of *LynxBrief*) needs to be included, to promote sustainable development and prevent further urbanisation. The EU and WWF have rejected the Spanish Natura 2000 proposal because it is inadequate for lynx and other species. Nevertheless, the Spanish Government has still not included missing areas for the lynx within the proposal.

The EU has suggested that it will finalise Natura 2000 areas by summer 2005. It is thus very important that individuals and organisations urgently contact both the EU and the Spanish Government to urge them to expand Natura 2000 to link the Sierra Morena with both Doñana and Montes de Toledo, and include “Viñas de Peñallana”. Please write to:

**Excma. Sra. D<sup>a</sup>. Cristina Narbona Ruiz**  
**Ministra de Medio Ambiente**  
**Plaza de San Juan de la Cruz s/n, 28071 Madrid, España**  
**Stavros Dimas, EU Environment Commissioner**  
**European Commission, B-1049 Brussels, Belgium**  
[stavros.dimas@cec.eu.int](mailto:stavros.dimas@cec.eu.int)

[lynxbrief@yahoo.co.uk](mailto:lynxbrief@yahoo.co.uk)

## Lynx Monitoring

Lynx monitoring is a vital part of the conservation effort, allowing conservation personnel and experts to know:

- The status and location of wild populations
- Problems affecting wild populations
- The effect of conservation projects

Lynx monitoring has also become quite political given that the confirmation of lynx presence means that the responsible government has a legal obligation to protect the area (e.g. through Natura 2000) and implement a lynx recovery plan.

At present there are three main methods for monitoring Iberian Lynx in the wild: camera traps, footprint surveys and DNA testing of possible lynx samples (e.g. hair and excrement). These methods have been found to be more reliable than direct human observation of lynx, which is often subjective, open to human error and difficult to conduct because lynx are elusive and hard to see in Mediterranean scrub-forest.



## Camera Traps

Over recent years various organisations, including Spanish Regional Governments, Fundación CBD Habitat, WWF Spain and the Spanish and Portuguese Ministries of the Environment, have developed and used camera traps to build up an accurate and up-to-date record of the species. Various types of lures are used, and camera traps allow researchers to record numbers by identifying individual lynx from their coat patterns. The camera is triggered automatically when the lynx approaches the lure and steps on a very sensitive “touch plate” on the ground.

Camera traps have been used for regular national lynx surveys (e.g. in Spain for surveys in 2002 and 2004). In addition, there are over 200 permanent camera traps deployed in the Andújar-Cardena lynx area, providing essential, accurate and up-to-date information on the status of this population. Camera traps in Andújar-Cardena have also been useful for confirming the presence of other rare species, such as wolves.

Camera traps are the most reliable, accepted and comparable method of lynx monitoring. However, they are expensive to use over large areas, given that each camera costs around €200 and one camera is needed per km<sup>2</sup> for a reliable survey. In addition, damaged or stolen cameras need to be replaced and personnel need to regularly retrieve and replace camera film.

## Footprint Surveys

As for many endangered animals, footprint surveys have also been used to record lynx presence. This is particularly the case in the Doñana area, where sandy soils make footprint surveys easier than in rocky areas such as the Sierra Morena. In Doñana, lynx footprint surveys are carried out every year, by conservation personnel and trained volunteers.

Footprint surveys are useful. However, they are not as reliable or as easy to conduct/compare across different geographical areas as camera traps surveys. In order to make footprint surveys more useful, accurate and reliable, WildTrack have been developing a computer algorithm to analyse digital photographs of suspected lynx footprints. The algorithm uses software similar to that used to analyse and distinguish photos of human faces, and would be able to reliably distinguish lynx footprints from those of other species, and could even identify footprints of specific individual lynx. WildTrack have already developed successful and useful computer systems for analysing footprints of other endangered mammals including white rhinos and Bengal tigers. See: [www.wildtrack.org](http://www.wildtrack.org)



An ideal Iberian Lynx footprint photo, with scale on both axis.

An algorithm to analyse Iberian Lynx footprints would be particularly useful to reliably confirm lynx presence over large areas not regularly surveyed by camera traps or teams of footprint trackers. Those working in the field would merely have to take a digital photo of a suspected lynx footprint, *including a scale*, and email the photo to WildTrack for confirmation.

In order to create the initial algorithm, WildTrack needs around 8 good left hind footprints photos, with a scale, for each of 10 known adult lynx. If you are able to supply footprint photos, from captive or wild lynx, and would like to participate in this research please contact WildTrack using the following details:

**Dr S Alibhai and Z Jewell,**  
WildTrack, Apartado 210,  
8550-909 Monchique, Portugal.  
Telephone/Fax: +351 282 911439  
email: [info@wildtrack.org](mailto:info@wildtrack.org) or [rhinowatch@clix.pt](mailto:rhinowatch@clix.pt)

## DNA testing of samples

The presence of lynx over large areas has also been investigated by DNA testing of excrement and hair samples. DNA testing of samples is necessary as samples are often visually indistinguishable from those of other species such as wild cats. DNA testing can reliably identify species and individuals of a particular species.

In recent years, DNA testing has been used by a number of organisations and has confirmed that there are at least some individual lynx still present in Guadelema (Castilla-La Mancha), Sierra de Gata (Extremadura/Castilla y Leon) and in areas close to the Spanish border in Portugal.

## New Lynx Presence confirmed!

Most recently, DNA testing of excrement samples collected by the Junta de Castilla-La Mancha has confirmed that there are at least 3 lynx individuals still living in the Montes de Toledo area in Castilla-La Mancha. For more information, see: <http://www.centroiris.org/noticias/noticias.php?nPos=0&lang=cas&svArticleGroup=&nID=1530>

This is very good news, because the Montes de Toledo population had been feared by some to be extinct. The confirmed presence of lynx highlights the need to work to recover the Montes de Toledo population in the future, and also stresses the importance of including areas linking Montes de Toledo with the Sierra Morena within Natura 2000, so that lynx can communicate between these two areas.

[lynxbrief@yahoo.co.uk](mailto:lynxbrief@yahoo.co.uk)

## Conclusions

*LynxBrief* welcomes the good news that the first captively bred lynx have been born and congratulates all those involved with the Captive Breeding Programme for their excellent work and achievement. However, in order for this success to contribute to long term lynx recovery, all those interested and working in lynx conservation need to continue working hard together, particularly to counterbalance conflicting policies and interests.

This month, it is **RECOMMENDED** that all those interested in lynx conservation **write to the governments of Andalucia and Portugal, calling on them to urgently approve Lynx Recovery Plans.**

It is also **RECOMMENDED** that those interested in lynx conservation **write to the Spanish Government and the EU, calling on them to expand the Natura 2000 proposal to link the Sierra Morena with both Doñana and Montes de Toledo, and include the area of “Viñas de Peñallana”, north of Andújar.**

Finally, **anyone who can provide digital photos of lynx footprints (that include a scale) should contact WildTrack, using the contact details provided.**

*LynxBrief* sends best wishes to all those interested and working in lynx conservation, and looks forward to receiving more of your comments and suggestions.

### About the author

*LynxBrief* is edited by **Dan Ward**, who has a degree in Natural Sciences (Cambridge University), a MSc specialising in Environmental Policy and experience in conservation projects in Scotland, New Zealand, Ecuador and Spain. He accepts no responsibility for the use that may be made of this report.

### About SOS Lynx

SOS lynx is a campaign organisation set up in 2000 to promote the conservation of the Iberian Lynx, and works mainly at the International level. For more information about, and to support, SOS lynx, see: [www.soslynx.org](http://www.soslynx.org)

### About Ecologistas en Acción – Andalucía

Ecologistas en Acción – Andalucía is a federation of ecological groups that works to conserve the Iberian Lynx and the natural environment in general, and promotes peace and solidarity. Ecologistas en Acción is not necessarily identified with all the contents of this publication. You can contact the organisation by email at: [andalucia@ecologistasenaccion.org](mailto:andalucia@ecologistasenaccion.org)

### About One Planet Living and Pelicano SA

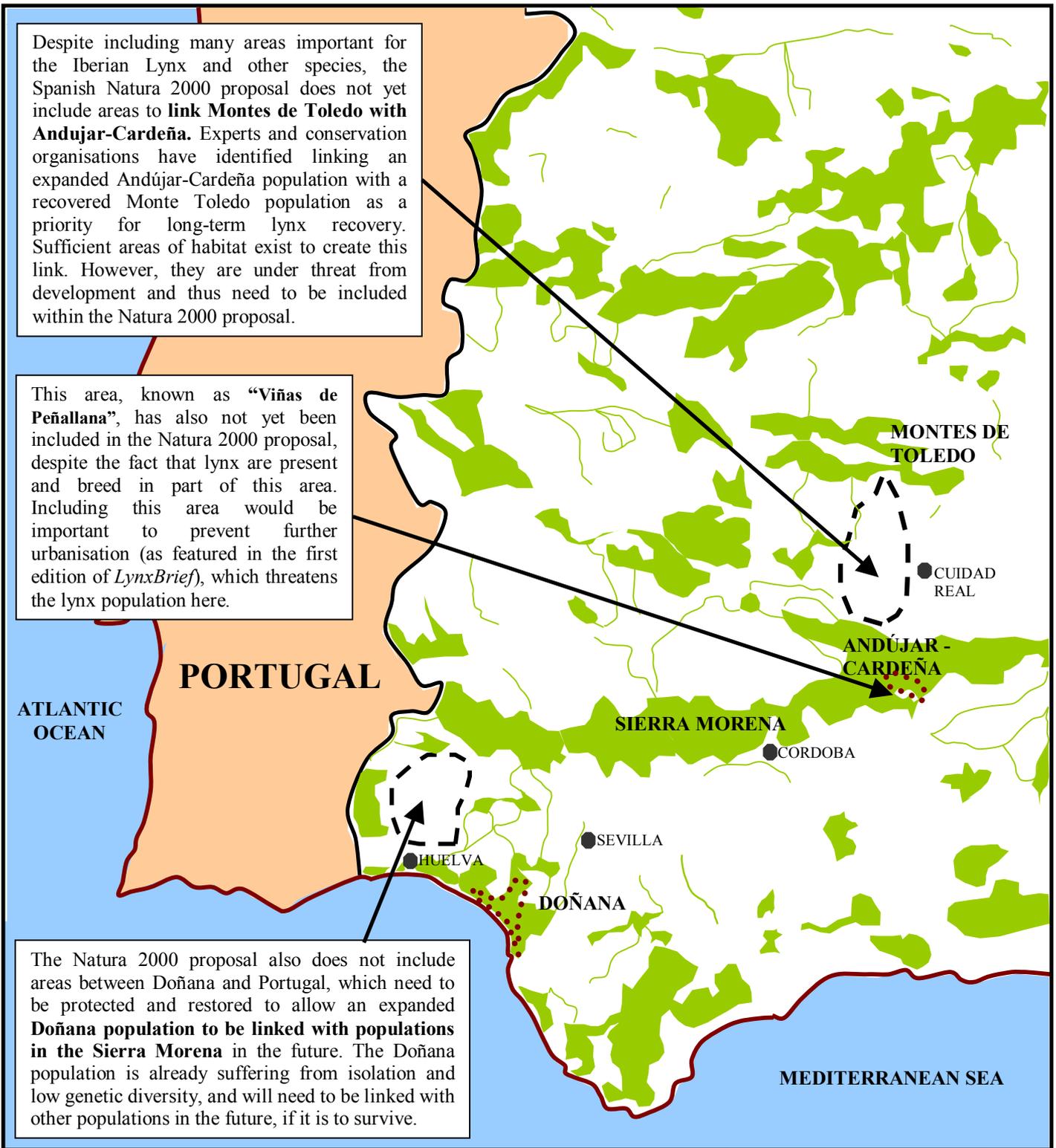
In 2001, UN Secretary General Kofi Annan said: “Our biggest challenge this new century is to take an idea that seems abstract – sustainable development – and turn it into a reality for all the world’s people”. BioRegional and WWF have sought to take up this challenge. One Planet Living (OPL) is a joint initiative that aims to make it easy, attractive and affordable for people everywhere to adopt sustainable lifestyles, and at the same time support nature conservation. Pelicano SA, a Portuguese developer, is a Founding Global Partner of the OPL initiative, and is directly supporting lynx conservation in Portugal.

# The Iberian Lynx and Natura 2000 proposals in Spain

Despite including many areas important for the Iberian Lynx and other species, the Spanish Natura 2000 proposal does not yet include areas to **link Montes de Toledo with Andujar-Cardena**. Experts and conservation organisations have identified linking an expanded Andujar-Cardena population with a recovered Monte Toledo population as a priority for long-term lynx recovery. Sufficient areas of habitat exist to create this link. However, they are under threat from development and thus need to be included within the Natura 2000 proposal.

This area, known as “**Viñas de Peñallana**”, has also not yet been included in the Natura 2000 proposal, despite the fact that lynx are present and breed in part of this area. Including this area would be important to prevent further urbanisation (as featured in the first edition of *LynxBrief*), which threatens the lynx population here.

The Natura 2000 proposal also does not include areas between Doñana and Portugal, which need to be protected and restored to allow an expanded **Doñana population to be linked with populations in the Sierra Morena** in the future. The Doñana population is already suffering from isolation and low genetic diversity, and will need to be linked with other populations in the future, if it is to survive.



**Area within Natura 2000: proposal by Spanish Government**  
(source: Spanish Environment Ministry)



**Approximate current Iberian Lynx distribution**  
(source: Guzman 2004)

