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CONVENTION ON THE CONSERVATION OF EUROPEAN WILDLIFE
AND NATURAL HABITATS

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Report of the 2nd visit of the International Committee for the Follow-up of Iberian Lynx Conservation Actions to Spain

(27-28 October 2003)

Document prepared by
Ms Agnieszka Olszańska, co-ordinator Large Carnivore Initiative for Europe (LCIE)
Mr Urs Breitenmoser, co-chair IUCN/SSC Cat Specialist Group
and the Directorate of Culture and of Cultural and Natural Heritage

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Abstract

On 2003 the Council of Europe (Bern Convention Secretariat), the IUCN/SSC Cat Specialist Group and the Large Carnivore Initiative for Europe (LCIE) formed an international committee to follow-up conservation actions on the Iberian lynx. The Committee visited institutions involved in the conservation of the Iberian lynx in Spain for the first time on 17 – 19 March 2003, for the second time on 27 – 28 October 2003 (the last visit was preceded by the more technical visit of Urs Breitenmoser, IUCN Cat SG and Alexander Sliwa, EAZA Felid Tag – report of the visit in Appendix 3). The second visit of the Committee focused on the political aspects of the Iberian lynx conservation (constitution of the Bilateral Commission and its work, signature of the agreement between the two administrations, preparation and implementation of the captive breeding programme). We were not visiting any of the filed projects in Andalucía (for the technical side of Iberian lynx projects advances and details of the projects implementation, see also the report in Appendix 3). There are efforts to intensify the *ex situ* conservation actions and some political decisions were taken in this regard. Since January 2003, there have been four females in captivity in El Acebuche experimental captive breeding station in Doñana NP, two males in Los Villares (Córdoba) wildlife rehabilitation station and one male in Jerez ZOO (from all those animals only one female and one male are in the right age to breed). The priority would be to at least try to socialize adult animals and start realisation of the objectives of the breeding programme.

1. Introduction

In 2002, the IUCN Red List authorities declared the Iberian lynx (*Lynx pardinus*) Critically Endangered. After the "International seminar on the conservation of the Iberian lynx" in Andújar (Spain) on 29-31 October 2002, and following the Recommendation N° 94. of the Standing Committee of the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) the "International Committee for the Follow-up of Iberian Lynx Conservation Actions to Spain" was formed. The Committee visited institutions involved in the conservation of the Iberian lynx in Spain for the first time on 17 – 19 March 2003.

From 27 to 28 October the group visited Spain for the second time. We met with the institutions and persons involved in the Iberian lynx conservation in Madrid and Sevilla. The official visit was preceded by the more "technical" visit of Urs Breitenmoser (IUCN Cat Specialist Group) and Alexander Sliwa (Wuppertal ZOO, EAZA Felid Tag) – see the report in Appendix 3.

Programme of the visit, institutions and experts met are to be found in Appendices 1 and 2.

2. Constitution of the Bilateral Commission and its work

On 2 March 2003 the agreement on the joint actions concerning the Iberian lynx conservation between the Ministry of Environment (Ministerio de Medio Ambiente) and Regional Ministry of Andalucía (Consejeria de Medio Ambiente de la Junta de Andalucía) was signed. Following that document the "Convenio de Colaboración" between Spanish Ministry of the Environment (Ministerio de Medio Ambiente = MIMAM) and Regional Ministry of Environment of Andalucía (Consejería de Medio Ambiente de la Junta de Andalucía = CMA) was signed on 9 June 2003. According to this convention, a Bilateral Commission was created, with members of the Central and Regional Ministries, as follows:

For the MIMAM :
Juan del Álamo Jiménez – Secretary General of the Ministry of Environment
Inés González Doncel – General Director of the Nature Conservation Dept.
Basilio Rada Martinez – General Director of the National Parks Dept.
Miguel Aymerich Huyghues as Secretary

For CMA :
Isabel Mateos Guilarte – Vice minister
Hermelindo Castro Nogueira – General Director of RENPA
José Guiraldo Romero – General Director of the Nature Cons. Dept.
Miguel Ángel Simón Mata as Secretary

Additionally, an Advisory Committee to the Bilateral Commission was created with the following members: for MIMAM: Borja Heredia (DGCN) and Francisco Cantos (National Parks); for CMA: Miguel Ángel Simón Mata and a person indicated by him.

Since 9 June 2003 the Bilateral Commission is the united body to take decisions concerning the Iberian lynx conservation in Andalucía. The **first meeting of the Bilateral Commission** took place in Lugar Nuevo (Andalucía) on 24 June 2003. The commission plans to meet at least three times a year. Several points were discussed at the first meeting: constitution of the Bilateral Commission and organization of work, current situation of the Iberian lynx, state of projects concerning Iberian lynx conservation, and exchange of information between the two partners (two documents, one on all actions since 1 January 2000 to date, a second one on future actions and plans are being prepared). The most important point was the Captive Breeding Programme, where urgent decisions had to be taken, including a coordinated approach on how to incorporate the animals once breed in captivity into the field projects. Furthermore, the commission decided on the transfer of males to El Acebuche station and the implementation of previous decisions of the Iberian lynx Working Group (see also reference and Appendix 3): The adult male from Los Villares breeding station (Córdoba) should have been transferred to El Acebuche station by the end of September 2003. He was however not transferred till now, because of the *Cytaouxzoon* infection (see below). Two more males were planned to be captured in October, one from the Andújar, the other from the Doñana population. At present, there are two juvenile males, both from the Andújar population, in Los Villares station (captured on 1 September 2003, born in 2002, with a leg injured and corona virus present), and in Jerez Zoo (a 6 months old rather healthy cub), respectively, but none of them is old enough to mate (for more details see report in Appendix 3). The juvenile male from Jerez Zoo should be transferred to El Acebuche station by the end of November.

The Experimental Captive Breeding Programme should be prepared and presented on the next Bilateral Commission meeting for comments and approval. A new director with adequate professional background was to be nominated and equipped with appropriate competences to decide and realise the objectives of the Captive Breeding Programme. At our meeting with MIMAM in Madrid, we were informed that the Commission had recently elected Dr. Astrid Vargas the new director of the conservation breeding programme.

The **second meeting of the Bilateral Commission** was organized on 20 October 2003. Astrid Vargas was invited to present her programme proposal (she had already prepared an earlier version of the programme) and to negotiate working conditions. The Captive Breeding Programme Director will be employed by the Ministry of Environment in Madrid, but will report to the Bilateral Commission.

The only adult male was finally not transferred from Los Villares to El Acebuche, because the blood parasite *Cyteauxzoon felis* was discovered in a blood test. The animal will be kept in quarantine in Los Villares until further tests allow assessing the risk of an infection of the animals in El Acebuche or the wild population in Doñana NP. The Bilateral Commission decided to wait until the week of 3 – 7 November for the veterinary analyses and report from the three veterinarians involved, in order to assess the suitability of the infected animals for the breeding programme. If the veterinarians' report would favour the transfer of the adult male to El Acebuche, another young subadult male should be captured in the Doñana area. If the report would not favour a transfer, a young adult male (ready to reproduce) should be captured instead. The International Committee offered to review the veterinary report once it would be available, in order to assist the Bilateral Commission's decision, and the proposal was welcomed and accepted. The definitive form of the Captive Breeding Programme should be ready by 30 November 2003 and subsequently discussed and approved by the Bilateral Commission[1].

Great progress has been made since March 2003 in regard to the co-operation between the National Ministry of Environment and the regional Ministry of Environment of Andalucía. The two administrations now work together, more and more efficiently and in a very progressive way. The Bilateral Commission is a powerful and still small enough body to provide leadership and to take fast decisions. Yet, there are still many points to discuss and to improve. Numerous problems may still

[1] On last week of November and adult male was captured in Andújar area. Unfortunately, after the veterinary and sanitary tests the animal was released because of the presence of the parasite (*Cyteauxoon felis)* in its blood.

stop (or delay) the captive breeding programme. The most urgent issue is to contract a director of the Captive Breeding Programme[2], responsible for the realisation of the programme – including the appointment of personnel –, for the co-operation with the *in situ* teams and outside experts. There are a number of problems hampering the Captive Breeding Programme, including lack of co-operation between the El Acebuche station staff on one side and the technicians of CMA and researchers of C.S.I.C. Estación Biológica de Doñana on the other side, but also conceptual and technical questions, such as implementation of the capture programme (the plan was to take the smallest cub from any litter of three, and/or juvenile dispersing animals, but also the capture of adult animals was discussed), veterinary procedures (e.g. length of the quarantine), breeding procedures (habituate the lynx with humans or not?) and incorporation of animals breed in captivity into the wild population. All these questions need to be resolved, and until then, many delays in realisation of the breeding programme are still possible.

3. Field projects in rabbit recovery areas, WWF/Adena campaigns and other issues

The International Committee had a short meeting with two representatives of WWF/Adena (Jesús Cobo, Luis Suárez) in Madrid, in order to get an update on the activities of NGOs. Luis Suárez and Jesús Cobo shortly presented the state of their conservation actions and campaigns in the Sierra Morena and Montes de Toledo (agreements with owners and managers of the private hunting estates, buying up of the hunting permissions for rabbits, establishing rabbit recovery areas with artificial breeding places; see spring 2003 report). The current problems are as follows:

WWF/Adena has funding to continue the contracts till the end of year 2005. Afterwards, an alternative way of solving the "rabbit-hunting-problem" in the private estates must be found.

Funds are also needed to continue the filed projects (mainly in rabbit recovery areas).

Other Spanish provinces than Andalucía should be involved in the Iberian lynx conservation (Castilla-la Mancha, Castilla-León, Extramadura and consequently also Portugal). Only Castilla-la Mancha has prepared an "Iberian lynx population recovery plan", which was approved by the local government.

WWF/Adena is very concerned about further development projects in habitats important for the recovery and spread of the Sierra Morena population. Luis Suárez informed the group about the planned construction of a new highway (Autopista N IV Toledo – Ciudad Real, continuing to Córdoba), which would cross the Sierra Morena just west of the Andújar population and obstruct the expansion of the population. The highway is cutting other potential recovery area for the lynx and other endangered species. This and other development projects must be reviewed under the aspect of their ecological and economical tolerability.

4. Conclusions and recommendations

As stated in the first report, the *ex situ* and *in situ* rabbit breeding programmes, and the projects on rabbit recovery and habitat improvement are progressing well and seem to stabilise the two remnant populations. Those conservation activities are fundamental for the survival of the populations in Sierra Morena and Doñana, which are the sole sources for the conservation breeding and future translocations.

There is a strong and urgent need to implement the Captive Breeding Programme soonest possible, trying not to lose this coming breeding season. The political and administrative preconditions are now met and both administrations work together, which gives hope for future common actions. We recommend to take all decision needed soon. Apart from technical captive breeding issues, a comprehensive strategy should be prepared, reassuring that the captive breeding programme is an integral part of the general conservation strategy and the reintroduction projects, which should involve not only Andalucía, but also other Spanish provinces and Portugal.

One of the priorities of this coming breeding season must be trying to socialise two adult animals (the female in El Acebuche and the male in Los Villares or a substitute), which would be also helpful

[2] Only some days after the meeting of the Bilateral Commission with the International Follow-up Group, Dr. Astrid Vargas was appointed new director of the conservation breeding programme.

for two juvenile females in El Acebuche. As mentioned above, one of the main concerns is to keep species-specific socialization of the animals kept already in captivity, and also elaboration of the techniques to breed animals in a way to be prepared to be rehabilitated for living in the wild. Current management methods in El Acebuche station may not be optimised for this and we recommend to review the procedures applied in collaboration with captive breeding and reintroduction experts.

Some further steps were proposed to the institutions and people involved in the Iberian lynx conservation for the discussion.

References

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Report of the visit of the International Committee for the Follow-up of Iberian lynx conservation Actions to Spain (17-19 March 2003). T-PVS Inf (2003) 5

Plan de cría en cautividad del lince ibérico (*Lynx pardinus*). Versión aprobada por la Comisión Nacional de Protección de la Naturaleza el 8 de febrero de 2001, Dirección General de Conservación de la Naturaleza, Secretaría General de Medio Ambiente, Ministerio de Medio Ambiente.

Agreement between Ministry of Environment and Regional Ministry of Environment of Andalucia (RESOLUCIÓN de 23 de Junio 2003, de la Secretaria General de Medio Ambiente, por la que se dispone la publicación del Convenio de Colaboración suscrito entre el Ministerio de Medio Ambiente y laJunta de Andalucía para el desarrolo de un unico programa coordinado de actuaciones para la aplicación de la Estrategia Nacional de Conservación del Lince en Andalucía.) [only in Spanish]

Report of the 1st meeting of the Bilateral Commission of 24 July 2003 (1º reunión de la Comisión Bilateral Consejeria de Medio Ambiente – Ministerio de Medio Ambiente para la conservacion del lince iberico (*Lynx pardinus*) en Andalucia. celebrada en Lugar Nuevo, Andujar (Jaen), el 24 de Julio de 2003) [only in Spanish]

Appendix 1. Programme of the visit

MONDAY, 27 OCTOBER

Morning – Meeting with Dirección General de Conservación de la Naturaleza y Organismo Autónomo de Parques Nacionales, Ministerio de Medio Ambiente.

Noon – Meeting with WWF/Adena.

Afternoon – departure for Sevilla

TUESDAY, 28 OCTOBER

Morning – Meeting in Sevilla with Junta de Andalucía

Noon – Meeting in Sevilla with Miguel Delibes and Paco Palomares, C.S.I.C. Estación Biológica de Doñana

Evening – departure for Madrid

Appendix 2. Participants of the meetings

Name	*Affiliation / function*	*Contact*
Fernández-Galiano, Eladio	Council of Europe, Head of the Natural Heritage and Biological Diversity Division	Council of Europe, Natural Heritage and Biological Diversity Division F- 67075 STRASBOURG Cedex France Tel: +33 388 41 22 59, Fax: +33 388 41 37 51 eladio.fernandez-galiano@coe.int
Olszańska, Agnieszka	LCIE coordinator	Institute of Nature Conservation PAS, Al. Mickiewicza 33, 31-120 Krakow, Poland Tel. +48 12 6322755 ext.146, Fax. +48 12 6322432 olszanska@iop.krakow.pl
Breitenmoser, Urs	IUCN/SSC Cat Specialist Group Co-Chair	c/o KORA Thunstrasse 31 CH-3074 Muri / Switzerland Tel: +41 31 951 90 20, Fax: +41 31 951 90 40 urs.breitenmoser@ivv.unibe.ch
Cobo Anula, Jesús	WWF/Adena	Gran Via de San Francisco, 8 esc. D. 28005 Madrid, España Tel: +34 91 3540578, Fax: +34 91 3656336 especies@wwf.es
Suárez, Luis	WWF/Adena	Gran Via de San Francisco, 8 esc. D. 28005 Madrid, España Tel: +34 91 3540578, Fax: +34 91 3656336 especies@wwf.es
González Doncel, Inés	Ministerio de Medio Ambiente DGCONA Director General de Conservacion de la Biodiversidad	Gran Via de San Francisco, 4. 28005 Madrid, España
Rada Martínez, Basilio	Ministerio de Medio Ambiente Director of the "Organismo Autónomo de Parques Nacionales, Ministerio de Medio Ambiente"	Gran Via de San Francisco, 4. 28005 Madrid, España
Aymerich, Miguel	Ministerio de Medio Ambiente DGCONA Subdirector General de Conservacion de la Biodiversidad	Gran Via de San Francisco, 4. 28005 Madrid, España Tel: +34 91 5975414, Fax: +34 925 267919 miguel.aymerich@dgcn.mma.es
Heredia, Borja	Ministerio de Medio Ambiente DGCONA Jefe Area Acciones Conservacion	Gran Via de San Francisco, 4. 28005 Madrid, España Tel: +34 91 597 5594, Fax: +34 91 597 5566 borja.heredia@dgcn.mma.es
Mariano Gonzales, Luis	Ministerio de Medio Ambiente DGCONA Jefe del Servicio de Especies amenazadas	Gran Via de San Francisco, 4. 28005 Madrid, España
Guzmán Lopez, Nicolás	DGCONA Coordinador nacional del Programa Lince	c/ San Benito, 13. Orgaz (Toledo), España nguzman@ctv.es
Isabel Mateos Guilarte	Vice-consejera de Medio Ambiente Junta de Andalucía	Avda. Manuel Siurot 50 E-41071 Sevilla, España
Guirado Romero, José Santiago	Junta de Andalucía, Consejería de Medio Ambiente Director General de Gestión del Medio Natural	Avda. Manuel Siurot 50 E-41071 Sevilla, España Tel: +34 955 00 34 00 / 955 00 35 00 Fax: +34 955 00 37 75 dggmn.cma@juntadeandalucia.es

Castro Nogueira, Hermelindo	Junta de Andalucía, Consejería de Medio Ambiente, Director General de la RENPA	Avda. Manuel Siurot 50 E-41071 Sevilla, España Tel: +34 955 00 34 00 / 955 00 35 00 Fax: +34 955 00 37 75
Delibes, Miguel	CSIC, Profesor de investigación	Estación Biológica de Doñana Av. M. Luisa S/N Apdo. 1056, E-41013 Sevilla, España Tel: +34 954 232340 Fax: +34 954 621125 mdelibes@ebd.csic.es
Palomares, Francisco Juan	CSIC, Associate professor of research	Estación Biológica de Doñana Av. M. Luisa S/N Apdo. 1056, E-41013 Sevilla, España Tel: +34 954 232340 Fax: +34 954 621125 ffpaloma@ebd.csic.es

Appendix 3

Report of the technical visit of Urs Breitenmoser (IUCN Cat SG)

and Alex Sliva (EAZA Felid Tag)

IUCN
The World Conservation Union

Assessment of the Conservation Breeding Programme for the Iberian Lynx

Urs Breitenmoser and Alexander Sliwa[3]

Introduction

The second visit of the international group to monitor and assess Iberian lynx conservation actions in the framework of the Bern Convention took place on 27 and 28 October 2003. In Madrid, the group met with the representatives of the Ministerio de Medio Ambiente (MIMAM) and in Sevilla with those of the Consejería de Medio Ambiente (CMA) of the Junta de Andalucía, respectively. Before this official visit of the international group, Urs Breitenmoser and Alexander Sliwa visited all sites and stations involved in the conservation breeding programme in Andalucía and discussed open questions and problems with people involved in the captive breeding or in lynx conservation activities in general.



Fig. 1. Young female Aura in El Acebuche breeding centre (Photo A. Sliwa).



Fig. 2. Hacinto/Ulysses in the quarantine enclosure in Los Villares wildlife rehabilitation centre. The only adult male in captivity is infected with *Cytauxoon felis* (Photo U. Breitenmoser).

In June 2003, MIMAM and CMA signed a convention for the collaboration in regard to the conservation of the Iberian lynx in Andalucía. The two authorities have formed a bilateral commission, which has, according to the convention, the task to stimulate, to plan and to implement the co-ordinated conservation actions. The commission presently reviews all activities in order to make them as complete and efficient as possible. The Bilateral Commission is the ultimate decision making body for the conservation of the Iberian lynx in Andalucía. Although it is clear that for a comprehensive long-term conservation strategy, the critically endangered Iberian lynx will need to recover in many other areas in Spain and Portugal, the fact that the only two remaining nuclei with reproduction are both in Andalucía calls for specific, targeted and quickly implemented actions in this

[3] Dr. Alexander Sliwa is curator of the Wuppertal Zoo, Germany, co-chair of the EAZA Felid Taxon Advisory Group and member of the IUCN/SSC Cat Specialist Group.

autonomous region. It is a glimmer of hope for the survival of the Iberian lynx that the Bilateral Commission now provides a strong leadership in the conservation of the species in Andalucía.

The aim of our visit in the captive breeding facilities and quarantine stations in Andalucía was to get first hand information on the conservation breeding programme regarding strategy, infrastructure and procedures, as we were worried about the further delay of the captive breeding. In addition, we have also visited the rabbit breeding station in El Acebuche and some habitat amelioration and prey enhancement sites in the Doñana National Park and in the Sierra Morena near Andújar. Although we consider these parts of the conservation activities of high importance, we do not further mention them here[4], as the main goal – and presently the main concern – was the conservation breeding programme. This report is written on behalf of the Bilateral Commission. However, to make it understandable to less involved readers, we repeat some aspects well known to the members of the commission.

Programme, people and sites visited

Wednesday, 22 October:

- Journey Madrid – Mérida – Sevilla. Glance at the natural parks in the western Sierra Morena (future lynx recovery areas).
- Meeting with Miguel Delibes, Estación Biológica de Doñana, in Sevilla.

Thursday, 23 October:

- Visit of the lynx conservation breeding centre El Acebuche, meeting with Celia Sánchez Sánchez (responsible veterinarian) and Pablo Pereira (responsible keeper).
- Visit of the rabbit breeding station El Acebuche and meeting with Blanca Ramos Losanda, programme director and conservation director of Doñana NP.
- Trip to the habitat and rabbit improvement sites and to the lynx feeding stations in the Doñana NP with Blanca Ramos Losanda.

Friday, 24 October:

- Visit of some of the Junta de Andalucía and the WWF/Adena field project sites in the Sierra Morena north of Andujar with Luis Suarez and Alfonso Moreno (WWF/Adena) and Jose María Gil-Sánchez (Junta de Andalucía).
- Meeting with Miguel Angel Simon (Junta de Andalucía) and Luis Suarez (WWF/Adena).

Saturday, 25 October:

- Visit of Los Villares, the rehabilitation centre of the Junta de Andalucía near Cordoba, meeting with Raphael Cadenas (conservation officer Junta de Andalucía) and Jorge Velarde (veterinarian).
- Visit of the rehabilitation centre of Jerez de la Frontera Zoo, meeting with Iñigo Sánchez (director of Jerez Zoo and co-ordinator of the Iberian lynx conservation breeding programme) and Jose María Aguilar (veterinarian).
- Trip to Torremolinos and meeting with Astrid Vargas (co-author of the conservation breeding action plan for the Iberian lynx and designated new director of the conservation breeding programme).

Sunday, 26 October:

- Return trip to Madrid Barajas airport and meeting with Agnieszka Olszanska (co-ordinator Large Carnivore Initiative for Europe and member of the Bern Convention group).

[4] See also Report of the Visit of the International Committee for the Follow-up of Iberian Lynx Conservation Actions to Spain (17 – 19 March 2003), document prepared by the Directorate of Culture and of Cultural and Natural Heritage, Council of Europe, Strasbourg

Status of the two remnant populations

The situation of the two remnant populations, the Andújar and the Doñana occurrences, respectively, has stabilised at best. The use of camera-traps in the Doñana population has revealed a total of 37 individuals (including young and subadult animals; P. Pereira, pers. com.), or 50-70 in a more statistical approach. The population density within the park is very low, but there is more lynx activity in adjacent natural park areas, mainly to the west than before. The Andújar population is at present estimated to include 20-25 breeding females (J. M. Gil-Sánchez, pers. comm.). The total distribution area of the Andújar population is said to be not more than 150 km²! Cubs found this year numbered 26 for the Andújar population, but only 6 in Doñana[5]. Not only the small number of animals in either population, but also the very limited dispersion hangs over the Iberian lynx like a Damocles' sword: Any additional catastrophic event – e.g. a forest fire – could destroy the core of such a small area.

Conservation breeding programme: animals in captivity

The two remnant populations in Andalucía are also the only possible sources for animals to be integrated into the conservation breeding programme for the Iberian lynx. There are at present (October 2003) seven lynx in captivity, four females and three males (Tab. 1, Fig. 1, 2). Only one animal is, however, really ready to reproduce this coming mating and breeding season: The 2-years old female Esperanza, a hand-reared and very tame animal. Another female, Morena, is now more than 12 years old and has never reproduced, and it is not sure that she ever will. Her contribution to a captive population would however be very important, as she is the only survivor of a now extinct nucleus from the eastern Sierra Morena and could contribute alleles otherwise lost for the gene pool forever. There is only one mature male in captivity (Fig. 2), in the Los Villares rehabilitation centre near Cordoba. He was not transferred to El Acebuche as intended, because he turned out to be infected with *Cytauxoon felis*, a blood parasite so far not known for European wild cat species. The infection was discovered in a blood smear via microscope in September and confirmed by PCR diagnoses. The second male in Los Villares, a young animal of last year, is also infected with *Cytauxoon* and was, in addition, positive for a Corona-virus?) via PCR. The third male, a juvenile kept in Jerez Zoo, is healthy.

Table 1. Iberian lynx in captivity (October 2003).

Sex	*Age*	*Name*	**Facility**	*Origin*	*Remarks*
F	13 ½	Morena	Acebuche	Cazorla[1]	From a now extinct population . Almost certainly too old to breed.
F	2 ½	Esperanza	Acebuche	Doñana	
F	1½	Saliega	Acebuche	Andujar	Smallest kitten taken from a litter of three
F	1½	Aura	Acebuche	Doñana	
M	2 ½	Hacinto/Ulys.	Villares	Andujar	Infected with *Cytauxoon*.
M	1 ½	Fran	Villares	Andujar	Broken leg. Infected with *Cytauxoon* and Corona-virus.
M	¾	Cromo	Jerez	Andujar	Problem with front leg -recovering

[1]Parque Natural de las Sierras de Cazorla, Segura y las Villas; this occurrence is now extinct.

Breeding and rehabilitation facilities

There are three sites involved in the conservation breeding programme in Andalucía: (1) the El Acebuche centre in the Doñana NP, built in 1992 as a conservation breeding facility for the Iberian lynx; (2) the Los Villares wildlife rehabilitation centre of the Junta de Andalucía in Cordoba; and (3) the rehabilitation centre of the Jerez Zoo in Jerez de la Frontera. El Acebuche is a well-designed breeding facility with eight large enclosures, each including a separable feeding cage with a capture box in the front and a separate den accommodation in the back (Fig. 3, 4). Each enclosure can be observed from a closed lookout, and video facility is pre-installed in the breeding boxes. Gates between all neighbouring pens can be operated from the outside. The breeding facility is completely

[5] Article in El Mundo, 4.9.2003.

enclosed by a blinded fence with electric wires on the outside to prevent any terrestrial animal to climb in. In addition, there is a quarantine house with three pens separated from the breeding facility.

Los Villares offers a shelter with three pens each in two rows to keep single lynx for a short while (Fig. 5). There are vertical sliding doors between neighbouring pens and peepholes in the inner doors. The facility is sufficient for animals to pass a quarantine, but not designed for captive breeding, as both, the installations for the animals and the setting up to observe the animals are limited. Los Villares has a large outside enclosure of about 1 ha, with trees, natural vegetation and running water where lynx can be rehabilitated. Technical installations are a blinded fence with electric topping, an observation tower, a lock to enter with a truck, and a capture system. Lynx in this enclosures are live-fed with rabbits.

Jerez Zoo has at present two relatively large pens to keep lynx under quarantine (Fig. 6). The pens are blinded against the outside, but otherwise, the technical installations are limited. A new conservation breeding centre is being constructed within the Jerez Zoo rehabilitation centre.



Fig. 3. Central part of El Acebuche breeding centre (Photo U. Breitenmoser).



Fig. 4. One of the eight enclosures at El Acebuche breeding centre (Photo U. Breitenmoser).



Fig. 5. Large enclosure at Los Villares wildlife rehabilitation centre (Photo A. Sliwa).



Fig. 6. Young male Cromo in the quarantine enclosure at Jerez Zoo (Photo A. Sliwa).

All three sites can offer quarantine facilities. In all sites, lynx could be kept with no or minimum contact to people; at Jerez Zoo, however, the rehabilitation centre is integrated in – although separated from – the zoo. Only El Acebuche has at present good installations to socialise individual lynx with conspecifics under controlled conditions and to breed lynx in captivity. This refers not only to the setting up of the cages, but also to the surveillance and observation facilities installed. Los Villares, on the other hand, has a large enclosure perfectly designed for lynx to be trained before they are released to the wild. The combination of three quarantine stations, a specific breeding centre in El Acebuche and a good training enclosure in Los Villares allows for a complete conservation breeding programme from the capture of wild animals until the re-introduction of lynx to the wild.

Problems

The conservation breeding programme stalls for many years. There were and still are technical problems to be solved, but, in our opinion, the main problems are conceptual ones, and, above all, human dimension aspects: there is no common vision, a demonstrated lack of leadership, and a deep mistrust between the potential partners involved. We have identified the following problems and/or points that would need to be (re)discussed:

- Structural and organisational problems:
  - No clear conceptual integration of the *ex-situ* and *in-situ* parts of the conservation programme into a common (and widely accepted) vision.
  - Complicated and/or unclear organisational structures and/or responsibilities.
- Conceptual aspects:
  - Capture concept (smallest of a litter of three or subadult dispersers) is questionable regarding the fast build-up of a breeding stock.
  - Co-operation and share of different tasks between the facilities to keep lynx in captivity must be clarified.
  - Lack of central databases (dead animals and dissections, respectively; animals in captivity) obstruct the consultation of outside expert colleagues.
  - Lack of alternative strategies or emergency concepts.
- Personal and human dimension problems:
  - Lack of experience in regard to conservation breeding and limited integration of people responsible for the conservation breeding into a professional environment. Outside expertise or peer review was not consequently searched.
  - Despondency of people involved after so many years without success.
  - Mistrust between people from the *in-situ* and *ex-situ* projects and apparent lack of will to co-operate.

The consequence of the structural shortcomings and the lack of co-operation was that decisions were not implemented or had to be re-negotiated over and over again. Valuable time was wasted (the El Acebuche breeding centre has been operative for eleven years without any cubs born in captivity!), and some genetic information still available in the early 1990s (e.g. from the female Morena) was irrevocably lost.

Assessment and recommendations

The Bilateral Commission has now given clear instructions (see below) how to overcome this deadlock. Yet, problems like new parasites diagnosed in the animals captured are emerging constantly, and many questions regarding the procedures and infrastructure still need to be solved. As Iberian lynx have never been bred in captivity, decisions must be based on comparisons with other species/situations. Even though we can hope that, like the other lynx species, Iberian lynx will be relatively easy to breed in captivity, there will still be a lot of questions to solve. As the target of this conservation breeding programme must be the immediate reintroduction of lynx, standard zoo-procedures may have to be adapted to this goal. This needs experience and needs time.

Decision making processes and responsibilities. The decision making processes seem to be unclear. The Acebuche team e.g. indicated that they do not know who is responsible for the assignment to capture additional male lynx. It is not enough to appoint a co-ordinator for the breeding programme; there must be a decision-making body with clear responsibilities in charge of the conservation breeding programme. This body must have competencies to decide about captures of animals in the wild, procedures in captivity, and transport of lynx and combination of pairs, and must be able and

willing to take risks and to relieve the people working in the captive breeding programme from being responsible for the success and failure of the whole programme. The Bilateral Commission should agree and decide on an outline programme (especially regarding strategic questions) and then delegate detail and emergency decisions to the technical staff. Everybody involved should be aware of his/her responsibilities and competencies. Progress can only be made if the people are willing to gain further experiences – learning by doing! – and to take the risk to make mistakes. As long as decisions about details e.g. regarding the care of the animals are regarded so important to influence and delay the whole programme, no progress can be made.

Breeding capacity of the animals in captivity. There are now four females and three males in captivity. Hence, the first goal of the conservation breeding plan is formally achieved. In fact, there is only one female (Esperanza) and one male (Hacinto/Ulysses) in the age to mate and breed, and all females and males are in separate locations. The female Morena is too old to breed and she is already lost for the breeding programme. All other animals are too young to breed and will be able to do so only in the year 2005 (the females Aura and Saliega) and 2006 (the males Cromo and Fran…), respectively. If no mature male is now brought to the females, at least four potential female-years will be lost.

All females are now socialised with the keeper. They will need to be socialised with their partners and be de-socialised from humans. Esperanza is the tamest of all lynx, and it would be important to bring her in contact with a potential mate now. First, this would allow gaining experience with this process before the other two females are ready to breed too (and several socialising processes must be run in parallel), and second, each year Esperanza continues to have social contact with humans only will make it more difficult to familiarise her with a conspecific.

Risk assessment. The health of the animals is a very important aspect for any captive breeding programme. In the situation of the Iberian lynx, however, veterinary considerations must not be the only aspects to decide on the fate of the animals. The risk to breed animals not totally free from any pathogens must be assessed with the risk of any further delay of the start of the breeding programme.

We recommend urgently to start the socialising process of Esperanza with a mature mate this fall/winter and to try to breed her next winter/spring. The loss of another year with Esperanza will also affect the breeding success with the two younger females! The health risk of the newly discovered blood-parasite *Cytauxoon felis* should be assessed by outside experts, and the above mentioned decision-making body should then decide, based on the report of the local veterinarians and the external review, whether Hacinto/Ulysses is brought to El Acebuche and socialised with Esperanza or not. In the case the decision is “no”, another physically healthy adult male (at least three years old) must be caught in the wild and – after a minimum delay through veterinary check-up – be brought to Esperanza. The Acebuche centre offers the possibility to keep Esperanza and her potential partner at a certain distance to the other lynx, and the enclosure is safe enough to avoid contacts to the wild lynx of the Doñana population.

Even if we assume that the decline of the two remnant populations has halted, there are good reasons not to wait another year with the start of the conservation breeding programme: (1) Both populations are very small in numbers and in distribution, and any additional threat or catastrophic event can bring them below a threshold were restocking is needed to maintain the populations vital. (2) At present, there is one female, Esperanza, ready to breed. In a year from now, there will be at least three. It would then be helpful to have already gained first experiences with the socialisation of Esperanza with a male. (3) It is important that the captive population grows quickly and can seed other conservation breeding programmes and that, as soon as possible, first reintroduction to the wild take place. It will be very difficult to maintain the field projects outside Andalucía, but also the funding and the public awareness over years without a clear perspective and a time plan for the return of the lynx.

Conclusions and addenda

We learnt only after our trip through southern Spain, when we met in Madrid and in Sevilla with the members of the Bilateral Commission, that an important decision was already taken by the commission: Dr. Astrid Vargas was nominated director of the conservation breeding programme. Astrid Vargas had already drafted the first captive breeding plan for the Iberian lynx. We very much

welcome such a decision, not only because from her professional background and international experience, Astrid Vargas is highly qualified for this position, but also because we think that, with the now existing constellation of people involved in the captive breeding, it will not be possible to create a combined conservation project integrating *in-situ* and *ex-situ* programme parts. The mutual mistrust is simply to strong.

The new director – regardless to her professional qualifications – will however not be successful if the above-mentioned structural problems are not solved. Furthermore, all individuals and institutions involved in the conservation of the Iberian lynx on the technical level must now work together and overcome old differences of opinions to create an atmosphere of mutual trust. There can be no doubt that during the initial and critical phase of the conservation breeding programme, errors and setbacks will occur. Such foreseeable obstacles must be overcome according to our best available knowledge and should not lead to a further delay or another fundamental dispute over the conservation breeding programme. Risks will have to be taken. The highest risk and the biggest mistake, however, would be to further delay the conservation breeding programme and to loose more time.

The international monitoring group can provide external experiences and can assist the decision making process through the review of proposed procedures. We can so reassure the Bilateral Commission to continue the now started process and support essential decisions. As international institutions dealing with nature conservation, we feel that we all should share the responsibility for the fate of the Iberian lynx.