



# Global Re-introduction Perspectives: 2011

More case studies from around the globe  
Edited by Pritpal S. Soorae



IUCN/SSC Re-introduction Specialist Group (RSG)





The designation of geographical entities in this book, and the presentation of the material, do not imply the expression of any opinion whatsoever on the part of IUCN or any of the funding organizations concerning the legal status of any country, territory, or area, or of its authorities, or concerning the delimitation of its frontiers or boundaries.

The views expressed in this publication do not necessarily reflect those of IUCN.

**Published by:** IUCN/SSC Re-introduction Specialist Group & Environment Agency-ABU DHABI

**Copyright:** © 2011 International Union for the Conservation of Nature and Natural Resources

**Citation:** Soorae, P. S. (ed.) (2011). *Global Re-introduction Perspectives: 2011. More case studies from around the globe*. Gland, Switzerland: IUCN/SSC Re-introduction Specialist Group and Abu Dhabi, UAE: Environment Agency-Abu Dhabi. xiv + 250 pp.

**ISBN:** 978-2-8317-1432-5

**Cover photo:** Clockwise starting from top-left:

- i. Mountain yellow-legged frog © *Adam Backlin*
- ii. American alligator © *Ruth Elsey*
- iii. Dwarf eelgrass © *Laura Govers, RU Nijmegen*
- iv. Mangrove finch © *Michael Dvorak BirdLife Austria*
- v. Berg-Breede whitefish © *N. Dean Impson*
- vi. Zanzibar red colobus monkey © *Tom Butynski & Yvonne de Jong*

**Cover design & layout by:** Pritpal S. Soorae, IUCN/SSC Re-introduction Specialist Group

**Produced by:** IUCN/SSC Re-introduction Specialist Group & Environment Agency-ABU DHABI

**Download at:** [www.iucnsscscrg.org](http://www.iucnsscscrg.org)

## Attempted supplementation of the relict wild Eastern population of northern bald ibis in Syria with Turkish semi-wild juveniles

Christopher G. R. Bowden<sup>1</sup>, Ali Hamoud<sup>2</sup>, Sharif Jbour<sup>3</sup>, Johannes Fritz<sup>4</sup>, Lubomir Peske<sup>5</sup>, Barbara Riedler<sup>4</sup>, Jeremy A Lindsell<sup>1</sup>, Mahmoud Al Shaiesh<sup>2</sup>, Ahmed Abdallah<sup>2</sup>, Christiane Boehm<sup>6</sup>, Taner Hatipoglu<sup>7</sup>, Jose P Tavares<sup>1</sup>, Mohammed Al Salamah<sup>8</sup>, Mohammad Shobrak<sup>9</sup> & Gianluca Serra<sup>10</sup>.

<sup>1</sup> - Royal Society for the Protection of Birds, The Lodge, Sandy, Beds, SG19 2DL, UK [Chris.Bowden@rspb.org.uk](mailto:Chris.Bowden@rspb.org.uk)

<sup>2</sup> - General Commission for Al Badia Management and Development, Syria

<sup>3</sup> - BirdLife International Middle East Division, P. O. Box 2295, Amman 11953, Jordan

<sup>4</sup> - Waldrapteam & University of Vienna, Austria

<sup>5</sup> - Czech Ornithological Society, Prague, Czech Republic

<sup>6</sup> - Alpenzoo Innsbruck-Tirol, Weiherburggasse 37a, A-6020 Innsbruck, Austria

<sup>7</sup> - General Directorate of Nature Conservation and National Parks, Ankara, Turkey

<sup>8</sup> - Saudi Wildlife Commission, PO Box 61681, Riyadh 11575, Saudi Arabia

<sup>9</sup> - PO Box 888 Taif, Saudi Arabia

<sup>10</sup> - IUCN Regional Office for West Asia (ROWA), Tohama Str., No. 6, Um Uthaina, P. O. Box 942230, Amman 11194, Jordan.

### Introduction

Critically Endangered northern bald ibis has had a precariously small population in the Middle East since rediscovery in Syria in 2002 when seven adult birds were found (Serra *et al.*, 2003), but it has since declined to three birds (one breeding pair) in 2010. Following unsuccessful attempts to release captive birds into wild northern bald ibis populations in the past (Bowden *et al.*, 2007) and given the complex social adaptability of the species (Pegoraro & Föger, 2001) and based on experience from European trials work, it was agreed that further work was needed before a re-introduction could be attempted. The International Advisory

Group for Northern Bald Ibis (IAGNBI –

[www.iagnbi.org](http://www.iagnbi.org))

recommended attempting supplementation with juvenile birds only as a last resort. When only three birds returned from migration in 2010, it was agreed that such an attempt was justified despite the low likelihood of success. The Turkish Government agreed to donate birds from the semi-wild population in Birecik



Northern bald ibis

which was considered appropriate genetic stock, and an attempt at supplementation was made using input and recommendations of IAGNBI. Development of the method for the supplementation was largely based on the outcome of experimental projects in Europe with hand-raised free-flying Northern Bald Ibises (Fritz, 2010).

## Goals

- **Overall Goal:** Stop the decline of the eastern population of northern bald ibis.
- **Goal 1:** To develop techniques to integrate and supplement semi-wild northern bald ibis with the wild population in Syria.
- **Goal 2:** To increase the population size of the remaining wild Syrian population with genetically similar juvenile stock.
- **Goal 3:** To facilitate contact between supplemented and wild birds in order to maintain a population with historical knowledge of the migration route and favored feeding grounds.

## Success Indicators

- **Indicator 1:** Selection and transportation of birds from Turkey to Syria.
- **Indicator 2:** Adjustment of the birds to a new area and maintaining their condition following relocation to a new aviary and site.
- **Indicator 3:** Social interaction with wild birds and the ability to form new social bonds and join a wild flock.
- **Indicator 4:** Released birds follow the wild birds to local feeding areas and on migration.
- **Indicator 5:** Maintain condition and survive to eventually return in later years to breeding area.

## Project Summary

**Feasibility & Implementation:** Two juveniles hatched in 2010 were selected from the semi-wild population at Birecik, and together with four adults selected to found a captive breeding program in Syria, these were transported by vehicle 250 km from Birecik in Turkey to Palmyra in Syria in June 2010 and housed in a permanent aviary 35 km from the wild colony. A temporary pre-release aviary was erected in advance, in close proximity to a regular feeding site of the wild birds to allow the wild birds to become accustomed to it. The captive ibises were transferred to the pre-release aviary (two adults together with the juveniles to ensure social stability) and further attract the wild birds. The three wild birds quickly showed interest in the captive birds (within a day), and approached them closely, particular the unpaired female which appeared most attracted to the adult male in the pre-release aviary. Two of the three wild birds left the area on migration less than two days after the juveniles were brought to the pre-release aviary, leaving just one remaining wild adult bird present - an adult female. It was therefore decided to release the captive juveniles the following day (four days earlier than originally planned). They joined the wild bird, and followed her on migration just one day later along with the one wild juvenile.

**Post-release monitoring:** The two released juveniles, the wild adult female and the wild juvenile were all fitted with satellite ptt's. The juveniles also had VHF tags attached for local tracking. They migrated 1,900 km to southern Saudi Arabia in the two weeks after departing Syria. The three juveniles appeared to migrate together with the wild adult female up to this point, travelling a mean of 240 km/day and a maximum of 350 km/day, but from here the adult female continued alone into Yemen and onward to Ethiopia and the three juveniles appear to have split up and wandered around in southern Saudi Arabia. Attempts were made to locate the birds in the field. One released juvenile was sighted in southern Saudi Arabia three weeks after leaving Syria. The wild juvenile was picked up moribund and later died in captivity two weeks after leaving Syria. The two released juveniles are assumed to have died in southern Saudi Arabia approximately 6 weeks and 8 weeks after leaving Syria. Both satellite PTTs were fitted with mortality switches which, based on movement, suggested they were dead. Temperature data also suggested mortality. However it was not possible to retrieve the tags (permission was not available to use the appropriate VHF receiver in Saudi Arabia to aid the search) so we cannot completely rule out the tags becoming detached in both cases, though this seems very unlikely.

### Major difficulties faced

- Permission to acquire the birds from Turkey was finalized only shortly beforehand.
- There were serious practical challenges of transportation and authorization due to the international border crossing.
- Selection of the Turkish birds would have been simpler with a more detailed database and history of the birds available.
- It was also difficult to know where the wild birds would be spending time since feeding sites often change - so predicting where to locate the pre-release aviary was a challenge and could not be planned until immediately beforehand.
- The wild birds departed from the breeding grounds almost two weeks earlier than in previous years, further restricting the opportunity for the supplemented birds to acclimatize and regain condition after the stress of relocation.
- There were problems getting sufficiently accurate locations and appropriate VHF equipment to locate the final sites where signals indicated the birds may have died. Getting fieldworkers to the locations quickly proved a particular challenge even once the locations were relatively precise, not permitting us to confirm the likely cause of mortality.
- Juvenile dispersal behavior is not well understood for this species, so we do not actually know what to expect in terms of juvenile timing of movements, and how long they can be expected to remain together with adult birds. It is likely that juveniles having suboptimal physical condition tend to fall behind the adults during migration, which may cause them to lose contact with the adult leaders. Although this may be natural, it could potentially be a problem, particularly once the population has dropped below a critical level and there are no other adults to follow.

## Major lessons learned

- Earlier selection of birds and transportation would allow the birds to regain condition prior to release.
- Supplementation does appear to be feasible despite early indications from other studies that such a technique might not be. The presumed close relatedness between the Syrian and Turkish populations may have contributed to this success.
- Based on this trial, the separation of juvenile birds from adults along the migration route seems likely to occur, Thus, post-separation monitoring and potentially further interventions may need to be considered.



**Syrian colony area with pre-release aviary**  
© Waldrapteam

## Success of project

Highly Successful	Successful	Partially Successful	Failure
		√	

### Reason(s) for success/failure:

- Overall the exercise was more successful than anticipated, particularly bearing in mind the very brief period of acclimatization possible before release and migration. The integration of the birds which followed one adult on the major migration just two days after release was remarkable. The fact that the birds apparently did not survive beyond 6 and 8 weeks however means this was ultimately not successful in the overall goal, but knowing that survival rates for wild juveniles are low (Serra *et al.*, 2010), this could be a matter of chance, and further trials are strongly recommended, but which allow more acclimatization time prior to release. The option to provide appropriate post-separation management (such as supplementary feeding, reuniting with adults) at migration staging grounds is also being considered to help improve condition and survival of the juveniles.
- Note that the source population from Turkey is not fully captive - birds are free flying for half the year, reared in the wild and have little direct human contact which may make them more suitable source material than fully captive reared birds.

## Acknowledgements

We thank the contributions and effort of the Turkish ministry of Environment and Forests for the provision of the birds from Birecik as well as their help in getting all the necessary permits for the operation. The Syrian General Commission for Al Badia Management and Development gave its full support. Other active partners and supporters were Doğa Derneği (BirdLife partner in Turkey), BirdLife Middle East, Saudi Wildlife Commission, IUCN Jordan office, Waldrappteam (Austria) Royal Society for the Protection of Birds (RSPB - BirdLife partner in UK), members of the International advisory Group for Northern Bald Ibis (IAGNBI) including Christiane Boehm in particular. Funds channelled through the above partners were from the Prince Albert II of Monaco Foundation (the BirdLife 'Species Champion'), The British Birdwatching Fair, the Netherlands Embassy in Damascus, National Geographical Society, Austrian Zoo Association. Finally, the activities were also promoted by the Syrian First Lady, H.E. Mrs. Assad and Mrs. Amine Erdogan, the wife to the Turkish Prime Minister. Additional key assistance in the field was provided by Ahmed Kanani, Ghazy Al Qaim, Abed, Faez and Norbert Lechner and a special mention for the dedication and expertise of Lubomir Peske.

## References

- Bowden, C. G. R., Boehm, C., Jordan, M. J. R. & Smith, K. W. 2007. Why is reintroduction of Northern Bald Ibis *Geronticus eremita* so complicated? An overview of recent progress and potential. In: Lamont, M.M., editor. The Proceedings of the IV International Symposium on Breeding Birds in Captivity; 2007 Sept 12 - Sept 16; Toronto, Ontario, Canada. p. 27 - 35
- Fritz, J. 2010. On the experimental introduction of migratory Northern Bald Ibis colonies. Proceedings of the International Advisory Group for the Northern Bald Ibis (IAGNBI). Böhm C. & Bowden C. (Eds.), Published by RSPB, The Lodge, Sandy, Bedfordshire, UK; pp. 62 - 69
- Pegoraro, K. & Föger, M. 2001. Individuality in the Northern Bald Ibis or Waldrapp Ibis *Geronticus eremita* - key features for a complex social system, *Acrocephalus*, 22, pp. 73 - 79
- Serra, G., Abdallah, M., Assaed, A., Abdallah, A., Al Quaim, G., Fayed, T., Assaed, A. & Williamson, D. 2004. Discovery of a relict breeding colony of northern bald ibis *Geronticus eremita* in Syria. *Oryx* (38): 106 - 108
- Serra. 2010. Report on Northern Bald Ibis expedition in Saudi Arabia, March 2010. IUCN ROWA report, 34 pp.