

Annual Report 2014



Fig.1: Immature Northern Bald Ibis; Photo by R Bateman.

PREFACE

2014 was the first year in the context of the European project LIFE+ „Reason for Hope“. Therefore it was a year in which it was essential to prepare for the realization of this six-year long species conservation program. After twelve years of method and feasibility studies, we can now focus on establishing the Northern Bald Ibis as a migratory bird species in Europe.

The transition to a major project happened in a rather fast and smooth manner. Since we already had the agreement for the LIFE+ budget by mid-2013, we had half a year to prepare before the start of the actual project. The time was well used. Yet the most essential reason for the successful project start and an effectual first project year was the continuity within the actors.

The Project Management Team is mainly composed of persons who proved themselves versatile and successful supporters during the feasibility study and paving the way for the LIFE+ Project, and now are permanent employees. Likewise the head of the Förderverein Waldrappteam largely consists of persons who have been working in the project for a long time. Also most of the LIFE+ Project partners and co-

financers already supported the project during the feasibility study.

Thanks to their support, I can report on a rather successful first year as part of the LIFE+ Project. Furthermore, of course, I want to thank all of those who were engaged in the project for the first time this year, mentioning all the volunteers, sponsors, partners, press and media members and friends of the Northern Bald Ibis.

Thank you very much!!!

Johannes Fritz
Waldrappteam
Head of the LIFE+ “Reason for Hope” Project Management
Team

1. DEMOGRAPHY



Fig.2: Photo by J Fritz

At the beginning of the project year we started out with a total of 23 individuals (10 females, 13 males). Details about gains and losses can be found in table 1. By the end of the year the population had grown to 43 individuals (22 females, 20 males, 1 unknown sex). In principle this is a positive balance. Considering the two breeding groups separately, the one in Kuchl near Salzburg accounts for most of the population gain. The birds in Burghausen produced plenty of offspring (12 fledged chicks), but had losses to nearly the same extent. The defined objective for the LIFE+ project is the annual population size (Tab.1: Grand Agreement). We achieved this objective in the breeding colony Kuchl/Salzburg with a plus of three individuals. Yet in Burghausen we missed the goal clearly, lacking 12 individuals to the defined number. The negative balance in Burghausen is mainly due to irregular breeding losses in 2013 (see annual report of 2013) and to the delayed autumn migration in 2014 (see 4. and 5.).

	BGH	SBG	Total	Breeding Group
Size Start 2014	16	7	23	9
Fledged	12	2	14	
Supplementation		1	1	
Handraised		15	15	
Mortality	9		9	
Removal	1		1	
Size End 2014	18	25	43	9
Grand Agreement	30	22	52	
Difference	-12	3	-9	

Tab. 1: Summary of the population development 2014; BGH: breeding area Burghausen; SBG: breeding area Kuchl in Salzburg.

2. SPRING MIGRATION



Fig. 3: Flight above the Adriatic Sea; Photo by AG Schmalstieg

On March 20, the first four birds left the wintering area. On March 25 the two males Hella and Jazu already arrived at their breeding site in Burghausen. A total of 12 birds left the wintering area. Only four immatures stayed there over the summer. Another 3 immatures stayed within the Italian borders as partial migrants. Yet another immature was found dead along the migratory route. The cause of death could not be determined, yet human involvement could be excluded. 13 birds reached the breeding areas in Burghausen and Kuchl. Due to injuries another 3 birds were not able to migrate on their own and were transferred to the breeding areas.

	BGH	SBG
Remaining in the wintering region	3	3
Departure from the wintering area	11	3
losses during spring migration	1	0
Arrival in the breeding area	10	3
Injured birds transferred to breeding area	2	1
Non-migratory breeding-birds	5	4
Total at beginning of the breeding season	17	8
Fledged chicks	12	2
Supplemented juveniles	0	1
Total of birds end of summer	29	11

Tab. 2: Summary for spring migration and reproduction 2014; BGH: breeding area Burghausen; SBG: breeding area Kuchl in Salzburg.

3. SUPPLEMENTATION AND REPRODUCTION



Fig.4: Adult Northern Bald Ibis with chick, breeding area Kuchl; Photo by B Aichner.

At the end of March nine birds with breeding experience were added to the two breeding colonies to increase the reproductive success, a measure which had proved to be effective in the past (Table 2). These supplementary breeding birds spent the winter in Tuscany together with the migrating birds. When the migrating birds reached their breeding areas, they found experienced breeding birds which were familiar to them, which led to fast breeding actions. In Burghausen a total of 12 birds fledged out of 6 nests, in Kuchl two nests each had one fledgling (Tab.2). At the beginning of July one already fledged chick from the breeding colony Alpenzoo Innsbruck was added to the breeding colony in Salzburg (direct supplementation). After a short time of acclimatization in the aviary, the bird was released into freedom and joined the group of experienced migratory birds.

4. AUTUMN MIGRATION AND ESCORT



Fig.5: Northern Bald Ibises in flight; Photo C Esterer.

All birds left the two breeding areas Burghausen and Kuchl in the first half of August. For the first time a bigger flock (19 birds) of both breeding

areas gathered at the southern outskirts of Salzburg in mid-August. Around mid-September 14 birds moved on to Mittersill on the northern edge of the Hohe Tauern, the other five stayed in Salzburg. Intentions to move towards south were observed repeatedly. But in the end all 19 birds stayed north of the central mountain range of the Alps until December. The main reason for the long stay north of the alps is very likely due to the abnormally mild weather conditions (warmest winter since measurements were taken, temperature maxima of 18.4°C in December; Source: Central Institute of Meteorology, Austria).

On December 26 a sudden change in weather brought temperatures of -10°C and heavy snowfall. The birds had to be captured immediately and subsequently released in South Tyrol early in 2015. We lost two experienced migrating birds (Mikesch and Pepe) due to the sudden onset of winter.

Before 2014, not a single bird stayed north of the Alps in autumn. We presume that the extraordinary weather conditions were the direct cause for the remaining of the birds on the northern edge of the Alps. Additionally a high number of immatures (10 out of 19 birds were inexperienced immatures) and a generally low migrating experience within the group due to the young migration tradition led to the group's erratic behaviour in this irregular situation. Also in other migratory bird species a considerable delay of autumn migration and losses were reported.

Seven birds of the breeding group were transferred to the Max Planck Institute for Ornithology (MPIO) in Radolfzell on August 10, where they spent the winter in temporary free flight. In the context of cooperation between the MPIO and the Waldrappteam, different data loggers were tested on the birds. The remaining two birds of the breeding groups along with one injured migrating bird were brought to Tuscany.

5. HUMAN LED MIGRATION



Fig. 6: Human led migration; Pilot W Holzmüller and foster parent AG Schmalstieg, Italy 2014; Photo by M Unsöld.

In spring 2014 16 chicks were taken from the breeding colony of Tierpark Rosegg in Carinthia, Austria and raised by the staff members C Esterer and AG Schmalstieg. One bird died already the day after it was taken from its nest. The other 15 birds were raised in the Zoo Vienna in the early stage. For this a container was purchased and equipped. In late May the team moved to the training camp in Grödig near Salzburg, where the hand-rearing continued and the flight training started. On August 25 the human led migration started. W Holzmüller and J Fritz piloted the two microlights. A German film team accompanied us throughout the whole migration.

For the first time the main chain of the Alps was crossed in one stage. The total duration with four flight days and eleven days in total of this ninth human led migration was by far shorter than all of the prior migration flights. This was accomplished thanks to an excellently imprinted and trained group of juvenile Northern Bald Ibises and to the optimization of processes after year-long experience.

6. SHORTY IN SWITZERLAND



Fig. 7: A monument was mounted for the Northern Bald Ibis Shorty in Zug at Lake Zug, Switzerland. Photo by M Brunold.

Shorty (generation 2012), the female that already spent the winter of 2012/13 at Lake Zug in Switzerland, migrated to Switzerland again in autumn 2014. In February 2015 she was rescued in Central Switzerland with frostbitten wings and brought to the Zoo Goldau for treatment. At the end of May she was transferred to the breeding colony in Burghausen. From now on she will be part of the non-migrating breeding group to prevent her from migrating again to Switzerland.

Shorty attracted attention in media unlike any other bird of our colony and so brought the Northern Bald Ibis back to the collective memory of the Swiss population in the sense of the project.

7. MORTALITY



Fig. 8: At this power line in Piding, Germany, four Northern Bald Ibises were electrocuted at the same time. In contrast to the regulations, the power line is unsecured; Photo by B Aichner.

In 2014 we lost 9 birds of the breeding colony Burghausen, out of which seven were experienced migratory birds. However, we did not have any losses in Kuchl near Salzburg (Tab. 4).

Another two deaths were caused by hypothermia and exhaustion due to the delayed autumn migration and a sudden onset of winter. If the birds had not been captured so quickly, the losses for sure would have been by far more serious.

One bird, which was an experienced migrant, left the breeding grounds in Burghausen with the other birds. At the beginning of September its GPS transmitter stopped working. On September 22 it was found dead in the Province of Livorno, Tuscany, with obvious gunshot wounds. It was the only bird that had independently crossed the Alps in 2014. Another 4 birds (2 adults, 2 juveniles) left Burghausen together and were electrocuted at an unsecured power line in Piding, Bavaria.

	BGH	SBG
delayed autumn migration	2	0
electrocution	4	0
illegal hunting	1	0
disease	1	0
predation	1	0
total	9	0

Tab. 4: Summary of 2014 deaths; BGH: breeding area Burghausen; SBG: breeding area Kuchl in Salzburg.

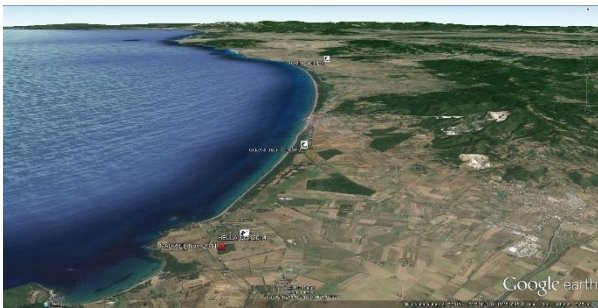


Fig. 9: Since 2011, five Northern Bald Ibises were shot or missing along a transect of about 30 km in the Province of Livorno, Tuscany. Thus this Province seems to be a hotspot of illegal hunting.

8. RESEARCH ACTIVITIES

Formation Flight (DFG 2012 Project Vo18061-1)

The data for this research project was already taken during the human-led migration of 2011. The partners were the Royal Veterinary College London, the Humboldt Universität Berlin and the University of Oxford. The two resulting publications stirred broad international interest:

Portugal SJ, Hubel TY, Fritz J, Heese S, Trobe D, Voelkl B, Hailes S, Wilson AM & Usherwood JR 2014. Upwash exploitation and downwash avoidance by flap phasing in ibis formation flight. *Nature*, 505, 399-402.

Voelkl B, Portugal SJ, Unsöld M, Usherwood JR, Wilson AM & Fritz J 2015. Matching times of leading and following suggest cooperation through direct reciprocity during V-formation flight in ibis. *Proceedings of the National Academy of Sciences*, 112/7, 2115-2120.

Data 2014

During the human-led migration 2014 all 15 birds were equipped with GPS data loggers (e-Obs). The flight path of every individual was registered in high resolution during the four flights (85,000 position points per bird). We will set about evaluating and publishing the data in 2015.

Research funding application FWF

In the autumn of 2014 a funding application was submitted to the Austrian Science Fund FWF. The planned project in cooperation with renowned research institutions is based on the results that have been published so far to the basic questions about bird flight.

Voelkl B & Fritz J. Kosten und Nutzen des Formationsfluges von Vögeln. Funding Application FWF 2014.

9. "REASON FOR HOPE"-FESTIVALS



Fig. 10: RfH festival at Parco Natura Viva. From left: Alessandro Salvelli (FIDC), Johannes Fritz (LIFE+), Cesare Avesani-Zaborra (Director Parco Natura Viva), Jane Goodall (Jane Goodall Institutes), Marco G. Romagnoli (CCT). Photo by M Unsöld.

The first "Reason for Hope" (RfH) festival in the context of the LIFE+ project took place from May 2 to 4 at Zoo Vienna. On the three event days there were about 40,000 visitors in the zoo. The board meeting and general assembly of the Förderverein Waldrapteam and also the first meeting of the Steering Committee of the LIFE+ project were held in this context. Representatives of all eight LIFE+ partners as well as three scientific advisors (Miguel Quevedo (IAGNBI, Zoo Jerez), Chris Bowden (IAGNBI, RSPB; via Skype), Phil Seddon (IUCN, Otago University New Zealand)) participated in the meeting.

The second RfH festival took place at Parco Natura Viva near Verona, Italy on October 12. Jane Goodall (Scientist, UN Messenger of Peace) also participated in this festival. The highlight of the event was the adoption of two Northern Bald

Ibises and the signing of support declarations by high representatives of the Italian hunting associations Federazione Italiana della Caccia (FIDC) and Confederazione Cacciatori Toscani (CCT).

10. PROJECT MANAGEMENT TEAM



Fig. 11: Participants in the LIFE+ Project Management Team meeting, February 2015; from left: B Gönner, D Tritscher, P Przesang, C Esterer, J Fritz, A Fritz, AG Schmalstieg, B Eberhard, C Sperger, M Unsöld, D Trobe, L Cibulski.

The LIFE+ project is managed and led by a Project Management Team which acts on behalf of the Förderverein Waldrappteam. The team mainly consists of persons who had previously been working for the Northern Bald Ibis project. J Fritz is the General Project Manager.

LIFE+ PARTNERS

Förderverein Waldrappteam (coordinating beneficiary); Alpenzoo Innsbruck, Tyrol; City of Burghausen; Konrad Lorenz Forschungsstelle; Country of Salzburg; Parco Natura Viva Garda Zoological Park; Zoo Vienna GmbH; Tierpark Rosegg

SPONSORS 2014

Bund Naturschutz in Bayern e.V.; Bundesministerium für Wissenschaft und Forschung; Ministerium für ein Lebenswertes Österreich; Mrs Maria Schram; HIT Umwelt- und Naturschutz Stiftung; Österreichische Zoo Organisation (OZO); Verein für Tier- und Naturschutz in Österreich. Grovni Stiftung; Zoo Schweiz; Tierpark Hellabrunn München

PARTNER INSTITUTIONS 2014

CRUMA Veterinary Wildlife Management Centre LIPU; Greifvogelstation Haringsee; Max Planck Institute for Ornithology Radolfzell; Oasi dei Quadris di Fagagna; Riserva Naturale della Foce dell'Isonzo; Stazione Biologica Isola Cona; Tierarztpraxis Völkendorf; Universität Wien; Veterinärmedizinische Universität Wien; Vogelwarte Radolfzell; World Association of Zoos and Aquariums (WAZA); WWF Italy; Zoologische Staatssammlung München; WWF Oasi Laguna di Orbetello.

TEAM 2014

Altnöder Ursula; Attenberger Birgit; Böhm Christiane; Cibulski Lara; Brandstätter Constanze; Brimmer Regina; Cianchi Fabio; Czerny Tanja; Dell'Agnolo Lisa; Derkmann Waltraud; Dorfner Monika; Dorfner Renate; Eberhard Barbara; Egger-Peitler Kilian; Ehetreiber Lisa; Esterer Corinna; Feichtner Gabi & Rudi; Füreder Klara; Franzke Siegfried & Brigitte; Fritz Angelika; Fritz Johannes; Geiger Jonathan; Gönner Bernhard; Graf Stefan; Grimm Johanna; Hafner Lynne; Heese Stefanie; Hoffmann Wiebke; Holzmüller Walter & Edith; Jubel Franz; Kaindl Vincent; Käßler Birgit; Kemethofer Manuel; Kirtz Manfred; Kotrschal Kurt; Liechtenstein Emanuel; Mader-Bock Barbara; Mader Bock Benjamin; Lotz Matthias, Andrea & Stefan; Lundt Holger; Meyer Jean; Murgia Ilaria; Palme Kirsten; Pertl Elisabeth; Perco Fabio; Perco Nicoletta; Pfäffl Barbara; Pfistermüller Regina; Prillinger Klaus; Przesang Pablo; Raffetseder Christian; Rassinger Bernd; Sax Andreas; Schnöll Georg & Georg jun.; Schweikl Marseta; Scope Alexandra; Schmalstieg Anne-Gabriela; Schläffer Johann; Schroll Michael; Siering Margarete; Sommer Evelyn; Spindler Ernst-Josef; Sperger Christian; Stadter Anette & Hans; Stanclova Gabriela; Steinberger Sandra; Strebel Gunter; Travali Angela; Trobe Daniela; Unsöld Markus; Vespignani Alex; Völkl Bernhard; Weber Sandra; Weber Andreas; Weindl Josef & Familie; Wiener Siegfried; Zimmer Susanne.

11. ACTION REPORT 2014 (SELECTION)

A.1 Permissions by national agencies

- Austria: permissions granted
- Germany: approval proceedings pending;
- Italy: permission granted by the ministry;

A.2 Action plan in the case of an illegal shooting

- available, being constantly held up to date;

A.3 Guidelines

- 14. Guidelines drawn up in a modular system;

C.1 Breeding colony Salzburg

- Change of partners from Zoo Salzburg to County of Salzburg;
- Setting up and launching the new breeding structure at Georgenberg/Kuchl;
- Reproduction: 2 fledged juveniles;
- Supplemented chicks: 1 (from the Alpenzoo Innsbruck);
- Population size end of 2014: 25 individuals (+3; 22/25 [target/actual]);

C.2 Breeding colony Burghausen

- High losses in 2013/14, especially of experienced migrants;
- Reproduction: 12 fledged juveniles;
- Population size at the end of 2014: 18 individuals; (-12; 30/18 [target/actual]);
Consequence: at least one, more probably two additional hand-rearings and human-led migrations for this breeding area in 2015/2016 (see C.3 & C.5);

C.3 Breeding colony Überlingen

- Establishment of the colony at the earliest in 2016 (see C.2 & C.5);
- Population size: 0 (0/0);

C.4 Wintering area WWF Oasi Laguna di Orbetello

- Aviary for the management of the colony in place;
- Management of the colony mainly done by D Trobe (Project Management Team) and Angela Travali (local subcontractor);

C.5 Human-led migration (HLM)

- Successful HLM in 2014 with 15 chicks from Tierpark Rosegg (Carinthia);
- Hand-rearing at Tiergarten Schönbrunn (Vienna) from April 23 to May 20 2014;
- May 21 2014: relocation to the trainings camp at Grödig/Salzburg;
- Foster Parents C Esterer, AG Schmalstieg (Project Management Team); Pilots W Holzmüller (Subcontract), J Fritz (Project Management Team);
- Team size: 13 persons;
- Duration: 11 days (August 25 – September 04 2014); total distance: 944 km; 4 day stages (236/301 km [mean/max]);

C.6 Breeding colony Rosegg

- Output 2014 for hand-rearing: 16 chicks; 24 juveniles in total;

C.7 Breeding colony KLF

- Output 2014 for hand-rearing: 0 chicks; 6 chicks in total;

C.8 Genetic Screening

- Marker development finished (MSc Sarah Wirtz, University of Trier/Germany);
- Sampling in zoo colonies, sedentary colonies and of all birds of the LIFE+ project ongoing;
- Management of action C.8: Alpenzoo Innsbruck (Tyrol);

C.9 GPS Monitoring

- All birds are equipped with fleetric tracking devices (battery powered; two types);
- Valid data in 2014: 40.000 position points;

C.10 Measures against illegal hunting of birds

- Startup of escorting the migratory birds during the autumn migration: September 16/17 2014 at Parco Natura Viva; 10 participants;
- Escorting at the end of 2014 still ongoing because of the delayed autumn migration (2014: 7.372 km driven by car);
- Online-database for the administration of contact details; 99 entries so far;
- Losses due to illegal hunting reduced → 2013: 1 shooting; 2014: 1 shooting;

C.11 Reason for Hope (RfH) Festival

- RfH Festival at Tiergarten Schönbrunn (Vienna) May 2-4; 40.000 visitors;
- RfH Festival at Parco Natura Viva (Bussolengo) October 11-12; 400 visitors; Jane Goodall participating; high media attention; 2 adoptions of NBI by representatives of Italian hunting associations; 10 adoptions of NBI by Italian school classes;

C.12 Food and veterinary supply

- Food: logistics optimized; residual waste reduced by using tins;
- Quantity of food: 2014 ~ 880 kg of food (1941 tins), centrally prepared at Tiergarten Schönbrunn;
- Veterinary supply under direction of Dr. Alexandra Scope, VetMed University Vienna; other veterinaries: Dr. Jean Meyer /Carinthia, Dr. Eva Haberpeuntner/Salzburg a.o.
- two veterinary screenings of the colonies in 2014, without special occurrences;

D.1 Impact on conservation targets

- GPS Tracking: 100% of the population; scientific analysis ongoing; Output 2014 e.g. Master Thesis M Bichler (publication manuscript);
- Veterinary Screening: twice a year scanning the whole population; additionally continuous screening; Veterinary Database established and maintained by A Scope; Scientific analysis ongoing;
- Coordination with the *International Advisory Group for the Northern Bald Ibis* (IAGNBI) continuously ongoing; Membership of J Fritz of IUCN Stork, Ibis and Spoonbill Specialist Group;

D.2 Impact of public relations

- Media clipping 2014: Cooperation with Tiergarten Schönbrunn and Parco Natura Viva; see E.6;

E.1 Homepage

- Number of accesses in 2014: 1.037.403; different visitors: 15.776

E.2 Noticeboards

- Noticeboards produced for all project sites; partially installed;

E.4 Trailer and Video clip

- Produced in three languages, each version as trailer (00:47) and video clip (03:16); online available on our homepage and on YouTube;

E.5 NBI Tracking App

- Online available via Android and Apple Store;
- Features still missing: Filter, Search; Italian version;

E.6 Overall public relations

- 2014: 138 media reports;
7 own publications;
4 major TV productions;
9 registered TV transmissions;
9 press releases;
NATURE Paper;
PNAS Paper at the beginning of 2015;
- Folder (GER, IT, ENG, Calendar, Info poster (GER, IT, GB), children's book (Cooperation with TGS);
- Facebook GER (1.857 Fans, range of the posts: 3.433); Facebook IT (1.079; 1.688);
- E-Newsletter GER (406 user); IT (51); GB (36);

E.7 Networking

- Networking a.o. with Green Teen Foundation; Projecto Eremita; Sparkling Science; LIFE+ Großtrappe;
- J Fritz 10 lectures (GER, AUT, IT, CH), M Unsöld 4 lectures (GER);

- Participations in the 147th annual meeting of the Deutschen Ornithologen-Gesellschaft at Bielefeld, October 1-6 2014; J Fritz, M Unsöld, M Bichler, 3 posters, 2 short lectures;
- Participation in the Bayerische Ornithologentage, March 7-9 2014; M Unsöld, M Dylla, 2 posters, 1 lecture;

E.9 Public relations Salzburg

- Visit of the First Vice-Governor of Salzburg Dr. Astrid Rössler of the training camp at Grödig and the breeding area Kuchl; handover of an honorary sponsorship;
- 4 guided tours at the training camp Grödig;

E.10 Public relations Burghausen

- Various guided tours for schools and other interested people;
- Local Party on July 26 2014;

E.12 Public relations WWF Laguna di Orbetello

- Visit of the mayor of Orbetello and of local media at the end of the HLM;

E.21 World Migratory Bird Day and Species Conservation Days

- 2014: presentation of the project at the following institutions: Tiergarten Schönbrunn, Tierpark Herberstein, Zoo Salzburg, Alpenzoo Innsbruck, Parco Natura Viva;
- 4 information tents bought;

E.22 Campaign against illegal hunting

- Honorary sponsorships: 15 (Italy); 6 (Austria); 1 (Switzerland);
- Cooperation agreements with two major Italian hunting associations;
- Subcontractor Italy: N Perco, A Zocchi;
- Lawsuit against the identified Italian poacher of two NBIs (2012): preparations for the criminal and civil action (both presumably taking place in 2015), initiatives by A Zocchi, assignment of a lawyer;

F.1 Project Management

- Assignment of a Project Management Team (PMT): J Fritz (Head), B Eberhard, C Esterer, A Fritz, B Gönner, AG Schmalstieg, C Sperger, D Trobe, M Unsöld;
- First Steering Committee Meeting on May 3 2014 at Tiergarten Schönbrunn; representatives of all project partners present; scientific advisors: Miguel Quevedo (IAGNBI, Zoo Jerez), Chris Bowden (IAGNBI, RSPB; per Skype), Phil Seddon (IUCN, Otago University New Zealand);

