

# Bearded Vulture European Endangered Species Programme (EEP): Annual report 2013

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## SUMMARY

In 2013 35 bearded vulture pairs in the EEP laid a total of 56 eggs, which resulted in 19 surviving juveniles. 13 of these were released in the 3 on-going reintroduction projects (Alps, Grands Causses & Andalucia), and 4 were added to the breeding network. Of the 19 offspring, 13 came from the specialized captive breeding centers, 4 from Zoos and 2 from a private collection. Two juveniles from the EEP have been, unfortunately, hand raised for flight shows, so these were "lost" for the EEP – this problem continues to persist, in spite of the clear guidelines and recommendations. There is currently a surplus of 13 females in the breeding network, so it will be necessary in the short term to keep males back for breeding.

Six new pairs were established in 2013 through transfers within the Zoos and centers, while the EEP lost 7 birds (died). Two new zoos also expressed interest to collaborate with the Bearded vulture EEP.

Faced with the imminent closure of Vallcalent, the VCF managed to secure an effective EEP coordination and keep the specialized breeding center in Catalonia open at least for the 2014 breeding season, following a very good response from EEP zoos and other organizations to the financial support requested - we thank you for your support, without this the future of the bearded vulture in Europe would look bleaker!

The VCF is now trying to enhance and improve the management of the EEP, and among other improvements, we have added a new service – Alex Llopis is available to visit your Zoo without any extra charge, and work with your bird curators on any aspect of bearded vulture husbandry, to maximize breeding and productivity, as well as animal welfare.

## INTRODUCTION

The international Bearded Vulture breeding network (EEP – European Endangered Species Programme) is a VCF-coordinated network of zoos, animal parks, captive breeding centers and private collections aiming to breed in captivity this species for conservation purposes. Since 1978, a total of 422 young Bearded Vultures have been successful bred, and 226 of those have been reintroduced in the wild, in three projects - the flagship Bearded Vulture reintroduction project in the Alps, the project in Andalusia (Spain) and also the one on the Grands Causses (France). The VCF's



final goal is to restore the species across its former range in Europe, and establish an European Bearded Vulture meta-population, with connections between the current European autochthonous isolated populations (Pyrenees, Corsica and Crete) with the reintroduced populations, in a continuum that goes from northern Africa (Morocco) to Asia (Turkey & the Caucasus).

In 2013 the EEP included 36 (mainly European) zoos, 3 large (red spots) and 2 smaller (green spots) specialized captive breeding centers, and 3 private keepers, keeping a total of 161 birds.



The distribution of the captive stock over many Zoos lowers bulk risks, e.g. epidemic diseases.

## **BREEDING RESULTS 2013**

## Specialized captive breeding centers

• Richard Faust Bartgeier Zuchtzentrum Haringsee (RFZ)

The RFZ, headquarters of the EEP and with a captive stock of 26 birds, is principally specialized in the reproduction of founder birds. During the breeding season 2013 six pairs laid eggs. Three of these are old and experienced breeding pairs, one a young pair that produced one egg for the second time, and two pairs laying for the first time (one of them a founder female). From the 10 laid eggs seven chicks hatched. Unfortunately three of these died – one a short time after hatching in the nest, the second one because of an infection in the yolk sack during hand-rearing, and the third during the adoption by the foster parents.

• Centro de Cria de Guadalentin (CCG)

The CCG, with a captive stock of 21 birds, is the basis of the Andalusian Bearded Vulture reintroduction project. From the six breeding pairs, one had to be separated after a fight, but the female produced short time later a fertile egg which hatched. Six chicks hatched from 9 laid eggs. All of them were reared successfully by parents or foster parents.

• Centre de Fauna Vallcalent (CFV)

The CFV was built to create a Pyrenean genetic reserve. Five from the 13 birds housed there are from the Pyrenees. During 2013 two pairs laid four eggs from which 2 chicks hatched. The two imprinted males, stimulated by their human carer, helped to incubate and both could rear successfully the chicks.



Bearded vulture EEP: results for 2013



BG 751 with 49 days old and a weight of 3629 g. He has been successfully reared by imprinted male BG 217.

• Breeding center Asters (Conservatoire d'Espaces Naturels Haute Savoie)

This is a small breeding center with a captive stock of 7 birds. In 2013 only one pair produced 2 eggs, from which one chick was reared successfully. The second very old pair did not lay again this year.

• Breeding center in Arth-Goldau (Natur und Tier Park Goldau)

This small breeding center is keeping 3 pairs. From the four eggs only one hatched, but the juvenile did not survive, dying a few hours after hatching.

Summary 18 breeding pairs in the specialized captive breeding centers laid 29 eggs. 13 offspring were successfully reared, 7 males and 6 females, while 4 hatchlings died.



Tierpark Goldau breeding Unit.

# Zoos, animal parks & private collections

• Zoos & animal parks

The Zoos play a crucial role in the EEP and in the conservation of bearded vultures. Although the success rate is on average lower than in the specialized breeding centers, they still contribute substantially to the number of young birds raised annually. Furthermore, by maintaining a captive stock distributed in several separate locations, we decrease the risks (for example in case of epidemic diseases). In addition, by showing this species as well as publicizing the *in-situ* conservation efforts to



large audiences in several countries, they contribute significantly to raise the public awareness about the species. The zoos help to build the core support for vulture conservation that would otherwise be impossible to achieve.

During the breeding season 2013 only 4 zoos (Nuremberg, Berlin (Tierpark), Schönbrunn and Helsinki) could successfully raise 4 offspring, 3 males and 1 female. The pairs in the zoos of Hannover, Berlin (Zoo Berlin), Plock, Chomutov, Liberec, Ostrava (2 pairs), Tallinn, Almaty, Riga, La Garenne, Plock and Monticello failed to produce young.

The very old pairs in Prague, Innsbruck, and Wuppertal didn't lay eggs.

- Summary 19 breeding pairs in the zoos laid 27 eggs. 4 offspring were successfully reared, 3 males and one female.
- Private keepers:

From the two private collections (Germany and England), only the pair in Germany laid eggs and produced two offspring (1 male, 1 female).

So in total, in 2013 35 pairs laid a total of 56 eggs, which resulted in 19 surviving juveniles. 13 of these were released, and 4 were added to the breeding network (see Table 2 in Annex I – Offspring in 2013).



Young Bearded Vultures from the EEP just after their release in the Swiss Calfeisen Valley. Currently there are approximately 200 Bearded Vultures in the Alps. This reintroduction project represents one of the most successful wildlife comebacks in recent history, and is based on the successful work of the EEP.

## **Problems within the Bearded Vulture EEP**

• Hand rearing and flight shows

In 2013, two juveniles from the EEP have been hand raised by a German keeper, to get birds for flight shows. These two juveniles could have been released otherwise – in 2013 there were not enough birds to continue the release in the Hohe Tauern National Park (Austria), for example. The same situation had happened already in 2012 (2 juveniles hand raised). The EEP's policy is very clear – it is necessary to avoid any hand rearing!

Using birds from the Bearded Vulture EEP for flight presentations means these birds are lost for the EEP breeding network. The Bearded Vulture EEP is one of the best managed, and a real showcase of how Zoos are contributing to real conservation of an endangered species. We should strive to correct these bad practices – birds from an EEP should not be hand reared and/or involved in flight shows.

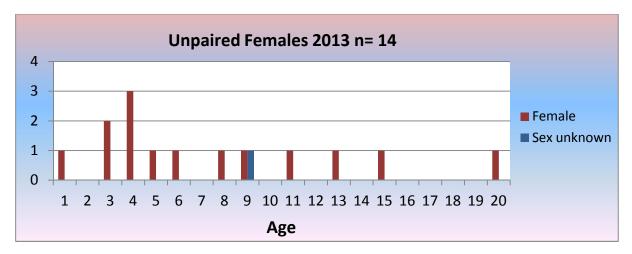




The final aim of the Bearded Vulture EEP is to produce chicks suitable for release, capable to survive in the wild without human help and able to reproduce when they arrive to their sexual maturity. Only natural reared chicks fulfill this aim.

• Sex ratio

There is currently a surplus of 14 females in the breeding network, with a severe lack of adult males. Even females which reproduced in the past cannot be paired at the moment due to the lack of males. Therefore it will be necessary to keep males back for breeding.



#### Transfers, additions, new partners, deaths

During 2013 8 birds were transferred (6 males and 2 females) with the objective to build six new pairs (1 in Vallcalent, 1 in Guadalentín, 1 in RFZ, 1 in Stuttgart zoo, 1 in Fauconnerie du Puy and 1 in breeding center Asters). Additionally one young female born in 2013 was transferred to one of our new partners, Parc Animalier des Pyrénées.





Parc Animalier des Pyrénées has built a completely new Bearded Vulture aviary.

From the 17 available chicks (2 were hand-reared and thus excluded), 4 were added into in the EEP network: 3 males and one female. The female was kept in the captive network because she was attacked as nestling by a genet and lost her left eye. Fortunately she is a descendent from a rare founder line (Pyrenean). This female has been transferred to the new partner Parc Animalier des Pyrénées. Additionally one adult injured wild male from Novosibirsk Zoo has been included in the EEP.

During 2013 two new zoos expressed interest to collaborate with the Bearded vulture EEP: The Parc Animalier des Pyrénées (France, Director Mr. Serge Mounard) is situated in the Pyrenean Mountains, close to free ranging Bearded Vultures. Alex Llopis visited this zoo and advised on the building of a brand new aviary. The first bird was also provided, the female with only one eye, which was transferred from her hatching place in Guadalentin to the new facility. The second partner is Novosibirsk zoo (Russia, Mrs. Olga Shilo, scientific director). This zoo received an injured bird (broken wing) from the wild, and agreed to collaborate in the EEP with this new founder. The results from the genetic sexing done by the EEP revealed that this bird is a male. The Novosibirsk zoo also constructed a new breeding facility, following guidelines and photos sent by the EEP coordinators.





The Novosibirsk Zoo reconstructed an aviary, adapting it for its Bearded Vulture.

During 2013 we lost 7 birds (4 males and 3 females).

One 23 years old male in the RFZ, BG 129, died because of aspergillosis. A 20 years old male, BG 190 from Walsrode zoo, Germany, died on the 19<sup>th</sup> of April (possible cause: as consequence of a lead intoxication suffered in 2009). A 7 years old male, BG 490 from Plock zoo, Poland, died after crashing with the fence. A 31 years old female, BG 054, from breeding center Asters, France, died after a severe fight with the male. A 28 years old female, BG 081, from Hannover zoo, Germany, died because of senile decay (acute cardiovascular failure and inflammatory processes in the liver and the kidneys).

Our oldest, and most important, pair in the captive breeding network also died. On the 18th of August, the 48+ years old male in the Alpenzoo Innsbruck - Tirol died because of its old age. Four months later, on the 27th of December, veterinarians from the Zoo euthanized the 50+ years old female, which was suffering. This pair produced an incredible 71 eggs. A total of 26 chicks fledged from these, and 13 of them have been released.

This pair has a symbolic place in the history of the EEP, as it was due to their constant breeding success that the idea of an internationally coordinated Bearded Vulture reintroduction project in the Alps based on captive breeding was established. The guidelines and working method of this long-term project were agreed at an international meeting celebrated in Morges (Switzerland) in 1978. One of the basic agreements was to use only birds that already lived in zoos, or take injured birds from the wild that did not recover to be re-released. No wild bearded vulture was ever taken from the wild to the captive breeding programme since 1978!

Bearded vulture EEP: results for 2013





The famous Alpenzoo Innsbruck breeding pair in their aviary. Many thanks for your inspiration and contribution over the years!

## **Outlook / News**

• Potential closure of Vallcalent & EEP coordination

During the summer of 2013, and due to the severe economic crisis currently affecting Spain, the VCF was confronted with a potential closure of the specialized captive breeding center in Vallcalent (managed by the Catalonian regional government). Vallcalent was created in 2005, with birds provided by the VCF, and has been ever since a key part of the bearded vulture EEP. Currently it has 13 bearded vultures, 7 of which are owned by the VCF. Its closure would have meant that the EEP overall productivity would crash, jeopardizing the current reintroduction projects, and making it impossible to plan new ones. At the same time, the management of the EEP would have suffered, as Alex Llopis would not have been able to continue its present role.

The VCF sprung into action to try to achieve a solution, and this was eventually agreed with the Catalonian regional government, but this has increased substantially the costs for the VCF, as Alex Llopis became a full time staff of the foundation. For this reason, the VCF has written to all EEP Zoos to ask for a financial contribution, large or small, that could contribute to cover these costs. Ideally, this contribution should be regular, to make the management of the EEP a sustainable operation.

The response from some Zoos has been very good, and due to their financial support we have been able to guarantee the EEP coordination and keep Vallcalent open at least for the 2014 breeding season. The VCF would like to thank all these zoos and organizations for their support – without them, the future of the bearded vulture in Europe would look bleaker!





The very successful specialized breeding center in Vallcallent was at risk of closing down due to the economic crisis in Spain.

• New advisory service offered by the VCF-EEP coordination

With Alex Llopis now working full time for the VCF, we are planning to enhance and improve the management of this network. All the EEP partners can ask for help and support from Alex Llopis regarding any question related to keeping and taking care of the bearded vultures. Further, we have added a new service – Alex Llopis is available to visit your Zoo without any extra charge, and work with your bird curators on any aspect of bearded vulture husbandry - we are only asking for the travel costs to be covered by the hosting zoo.

During autumn 2013 two zoos have already use this new service (Zoo Parco Natura Viva, Italy, and Natur und Tierpark Goldau, Switzerland).



Bearded Vulture aviary, Parco Natura Viva, Italy

During these visits Alex Llopis could speak with all the staff and make joint observations of the birds and their behaviour. The visits resulted in a full report, including several recommendations on aviary modifications to maximize breeding potential (e.g. roost locations for better utilization of the aviary,



how to avoid disturbances from neighbor species, suggesting better nest location, nest building, detection of dangerous structures in the cage, etc.), and also husbandry recommendations (e.g. avoid entering the cage while putting food, how to give nest material, etc.).



Thanks to the good cooperation in the Bearded Vulture EEP, the goal to re-establish an European metapopulation is getting closer.

We would like to thank our sponsors:





# **ANNEX I**

Bearded vulture EEP: results for 2013

AUSTRIA	PAIR	LAY DATE	HATCH DATE	
Alpenzoo Innsbruck	BG 019 x BG 021	-	mating & nest building	
Tiergarten Schönbrunn	BG 201 x BG 044002003	1 <sup>st</sup> : 05 <sup>th</sup> Jan 2 <sup>nd</sup> : ? <sup>th</sup> Jan	disappeared 28 <sup>th</sup> Feb	
Richard Faust Zentrum	BG 108065040 x BG 175152153	1 <sup>st</sup> : 14 <sup>th</sup> Dec 2 <sup>nd</sup> : 23 <sup>th</sup> Dec	06 <sup>th</sup> Feb 13 <sup>th</sup> Feb	
	BG 017019021 x BG 070022023	1 <sup>st</sup> : 28 <sup>th</sup> Dec 2 <sup>nd</sup> : ? Jan	20 <sup>th</sup> Feb 01 <sup>st</sup> Mar (died by the adoption 13 <sup>th</sup> Mar)	
	BG 199 x BG 107150151	1 <sup>st</sup> : 24 <sup>th</sup> Dec	$21^{st}$ Feb (died yolk sack infection $24^{th}$ )	
		2 <sup>nd</sup> : 01 <sup>st</sup> Jan	Aborted	
	BG 468223132 x BG 453286153	1 <sup>st</sup> : 06 <sup>th</sup> Feb	$30/31^{th}$ Mar (died $31^{th}$ Mar)	
	BG 399159270 x BG 278065074	1 <sup>st</sup> : 26 <sup>th</sup> Jan	broken	
	BG 129051049 x BG 482	1 <sup>st</sup> : 24 <sup>th</sup> Jan 2 <sup>nd</sup> : ? Jan	21 <sup>st</sup> Mar Aborted (very small egg)	
	BG 156154155 x BG 006019021	-	nest building	
FRANCE Breeding Centre Asters	BG 087014010 x BG 054034035	-	mating & nest building	
	BG 297086104 x BG 115019021	1 <sup>st</sup> : 08 <sup>th</sup> Dec 2 <sup>nd</sup> : 15 <sup>th</sup> Dec	02 <sup>th</sup> Feb putrefied	
<b>GERMANY</b> Hannover Zoo	BG 080019021 x BG 081004027	1 <sup>st</sup> : 30 <sup>th</sup> Dec 2 <sup>nd</sup> : 08 <sup>th</sup> Jan	Broken (disturbance aquila nipalensis) aborted	
Tierpark Friedrichsfelde Berlin	BG 294017070 x BG 292199107	1 <sup>st</sup> : 16 <sup>th</sup> Jan 2 <sup>nd</sup> : ? Jan	aborted 18 <sup>th</sup> Mar	
Berlin Zoo	BG 298122118 x BG 320018272	1 <sup>st</sup> : 14 <sup>th</sup> Jan	infertile	
Nuremberg Zoo	BG 018019021 x BG 336201044	1 <sup>st</sup> : 28 <sup>th</sup> Jan	25 <sup>th</sup> Mar	
Wuppertal Zoo	BG 043019021 x BG 040034035	-	mating & nest building	
Walsrode	BG 190152153 x BG 209150151	-	mating & nest building	
Private Mr. Hochlenert	BG 203150151 x BG 398159270	1 <sup>st</sup> : 06 <sup>th</sup> ? Jan 2 <sup>nd</sup> : 22 <sup>nd</sup> ? Jan	28? <sup>th</sup> Feb <b>(handreared)</b> 16 <sup>th</sup> Mar <b>(handreared)</b>	
<b>KAZAKHSTAN</b> Almaty Zoo	BG 159 x BG 270	1 <sup>st</sup> : ?	Infertile?	

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SPAIN			
Centro de Cría Guadalentín	BG 286 x BG 153	1 <sup>st</sup> : 15 <sup>th</sup> Dec 2 <sup>nd</sup> : 21 <sup>st</sup> Dec	08 <sup>th</sup> Feb 13 <sup>th</sup> Feb
	BG 313009006 x BG 330108119	1 <sup>st</sup> : 15 <sup>th</sup> Jan	08 <sup>th</sup> Mar
	BG 391124041 x BG 360018272	1 <sup>st</sup> : 28 <sup>th</sup> Feb 2 <sup>nd</sup> : 06 <sup>th</sup> Mar	putrefied putrefied
	BG 223014010 x BG 329043030	1 <sup>st</sup> : 25 <sup>th</sup> Dec	17 <sup>th</sup> Feb
	BG 337201044 x BG 317017070	1 <sup>st</sup> : 09 <sup>th</sup> Jan 2 <sup>nd</sup> : 14 <sup>th</sup> Jan	03 <sup>th</sup> Mar 07 <sup>th</sup> Mar
	BG 362080081 x BG 389199107	1 <sup>st</sup> : 23 <sup>th</sup> Dec	putrefied
Centre de Fauna Valcallent	BG 124131132 x BG 142009041	1 <sup>st</sup> : 27 <sup>th</sup> Dec 2 <sup>nd</sup> : 16 <sup>th</sup> Jan	putrefied putrefied
	BG 371105178 x BG 103065040	1 <sup>st</sup> : 23 <sup>th</sup> Dec 2 <sup>nd</sup> : 01 <sup>st</sup> Jan	13 <sup>th</sup> Feb 21 <sup>st</sup> Feb
	BG 410286153 x BG 412	-	mating & nest building
	BG 551 x BG 588371103	-	mating & nest building
Centre de Fauna Torreferrussa	BG 500 x BG 513009006	-	mating & nest building
SWITZERLAND			
Breeding Centre Goldau/Rigi	BG 174134135 x 118154155	1 <sup>st</sup> : 02 <sup>nd</sup> Jan	25 <sup>th</sup> Feb (died after hatching)
	BG 060034035 x BG 091005006	1 <sup>st</sup> : 30 <sup>th</sup> Dec 2 <sup>nd</sup> : 15 <sup>th</sup> Feb	aborted disappeared
	BG 145131132 x BG 276199107	1 <sup>st</sup> : 02 <sup>nd</sup> Feb	aborted
La Garenne Zoo	BG 034 x BG 130150151	1 <sup>st</sup> : 24 <sup>th</sup> Dec	putrefied
TS-REPUBLIC			
Prague Zoo	BG134 x BG 135	-	mating & nest building
Liberec Zoo	BG 180161162 x BG 274	1 <sup>st</sup> : 06 <sup>th</sup> Dec 2 <sup>nd</sup> : ? <sup>th</sup> Dec	aborted infertile
Chomutov Zoo	BG 340018272 x BG 338134135	1 <sup>st</sup> : 15 <sup>th</sup> Jan 2 <sup>nd</sup> : 23 <sup>th</sup> ? Jan	aborted disapperared
Ostrava Zoo	BG 207017070 x BG 233122118	1 <sup>st</sup> : 30 <sup>th</sup> Dec 2 <sup>nd</sup> : 10 <sup>th</sup> ? Jan	aborted broken
	BG 325017070 x BG 322152153	1 <sup>st</sup> : 05 <sup>th</sup> Jan 2 <sup>nd</sup> : ? Jan	aborted aborted
Private Mr. Stika	BG 470159270 x BG 303009006	-	nest building
<b>ESTONIA</b> Tallinn Zoo	BG 431 x BG 436180274	1 <sup>st</sup> : 26 <sup>th</sup> Jan	disappeared

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		2 <sup>nd</sup> : 01 <sup>st</sup> ? Feb	disappeared
<b>LATVIA</b> Riga Zoo	BG 327105178 x BG 381159270	1 <sup>st</sup> : 14 <sup>th</sup> Jan	infertile
FINLAND		st nd	th
Helsinki Zoo	BG 179154155 x BG 281131132	1 <sup>st</sup> : 02 <sup>nd</sup> Jan	20 <sup>th</sup> Mar
POLAND			
Plock Zoo	BG 490 x BG 502	1 <sup>st</sup> : 14 <sup>th</sup> Feb	broken
ENGLAND			
Private Center	BG 722154155 x BG 723154155	-	mating & nest building
ITALY			
Center Monticello (M. Albertini)	BG 234086104 x BG 397201044	1 <sup>st</sup> : 27 <sup>th</sup> Jan 2 <sup>nd</sup> : 03 <sup>rd</sup> ? Feb	broken aborted

#### TABLE 2. OFFSPRING IN 2013

STUDBOOK NO.	PARENTAGE	SEX	<b>BREEDING STATION/ZOO</b>	DESTINATION
BG 746	BG 297 x BG 115	f	Breeding Center Asters	RELEASE (Castril, Andalusia, SPAIN)
BG 747	BG 286 x BG 153	f	Centro de cría Guadalentín	BREEDING
BG 748	BG 108 x BG 175	m	Richard-Faust-Zentrum	BREEDING
BG 749	BG 108 x BG 175	f	Richard-Faust-Zentrum	RELEASE (Calfeisental, SWITZERLAND)
BG 750	BG 286 x BG 153	f	Centro de cría Guadalentín	RELEASE (Calfeisental, SWITZERLAND)
BG 751	BG 371 x BG 103	m	Centre de Fauna Vallcalent	RELEASE (Castril, Andalusia, SPAIN)
BG 752	BG 223 x BG 329	f	Centro de cría Guadalentín	RELEASE (Castril, Andalusia, SPAIN)
BG 753	BG 371 x BG 103	m	Centre de Fauna Vallcalent	BREEDING
BG 754 <sub>1)</sub>	BG 199 x BG 107	?	Richard-Faust-Zentrum	DIED
BG 755	BG 017 x BG 070	m	Richard-Faust-Zentrum	RELEASE (Mercantour, FRANCE)
BG 756 <sub>2)</sub>	BG 017 x BG 070	?	Richard-Faust-Zentrum	DIED
BG 757	BG 337 x BG 317	f	Centro de cría Guadalentín	RELEASE (Mercantour, FRANCE)
BG 758 <sub>3)</sub>	BG 174 x BG 118	?	Tierpark Goldau	DIED
BG 759	BG 201 x BG 044	f	Schönbrunn Zoo	RELEASE (Vercors, FRANCE)
BG 760	BG 337 x BG 317	m	Centro de cría Guadalentín	RELEASE (Cevennen, FRANCE)
BG 761	BG 313 x BG 330	m	Centro de cría Guadalentín	RELEASE (Cevennen, FRANCE)
BG 762	BG 294 x BG 292	m	Tierpark Berlin Zoo	RELEASE (Centenares, Andalusia, SPAIN)
BG 763	BG 129 x BG 482	m	Richard-Faust-Zentrum	BREEDING
BG 764	BG 179 x BG 281	m	Helsinki Zoo	RELEASE (Vercors, FRANCE)
BG 765	BG 203 x BG 398	?	Private M. Hochlehnert	Hand-raised
BG 766	BG 203 x BG 398	?	Private M. Hochlehnert	Hand-raised
BG 767	BG 018 x BG 336	m	Nuremberg Zoo	RELEASE (Centenares, Andalusia, SPAIN)
BG 768 <sub>4)</sub>	BG 468 x BG 453	?	Richard-Faust-Zentrum	DIED

1) died with an age from 5 days: yolk sack infection

2) died with an age from 12 days: by the adoption

3) died a few hours after hatching

4) died a few hours after hatching

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