Bearded Vulture European Endangered Species Programme (EEP): Annual report 2024

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SUMMARY

2024 has been the best year of chick production in the history of EPP with 44 fledglings, coming from 45 bearded vulture laying pairs that laid 75 eggs. Of these 44 fledglings, 29 came from the specialized captive breeding centres (25 laying pairs; one foster pair included), and 15 from Zoos, recovery centres and private collections (20 breeding pairs). 11 fertile eggs didn't hatch, 4 chicks died during the hatching and 5 died afterwards.

This high chick production is mainly explained by two factors: an extraordinary egg fertility rate of 86.48% this year for the breeding pairs compared to an average of 65.34% (2019-2023), as well as a high percentage of double clutches (68,18%), meanwhile the registered average of pairs with double clutches within the EEP is 56.17% (n= 1125 clutches, 1978-2023).

8 experienced breeding pairs failed to reproduce in 2024, showing an aging effect as some breeding pairs are over 30 years old. On the other hand, five pairs have produced a chick for the first time in 2024.

24 nestlings have been released in the wild and 20 kept for the captive breeding network with the goal to increase the EEP breeding capacity in the near future.

We continue the protocol for the extraction of blood samples from 90-day-old chicks to obtain refences for the blood parameters, as well as the WNV vaccine trial. 25 birds from Vallcalent have been vaccinated, plus the pairs at Jerez, Oasi di Sant 'Alesio and Córdoba Zoos, and the three birds at Montowl.

30 birds were transferred between the EEP centres, mainly to create new breeding pairs. Only two could not be transferred, and three more are outside of the European Union, so for the moment is not possible to move them.

The monitoring has been improved in the three main specialised breeding centre with the installation of a good number of new cameras inside the aviaries which helps to prevent the losses of chicks.

In October, a workshop on artificial incubation and chick rearing was organised by the VCF in collaboration with Asters at Parc Animalier des Pyrénées for EEP French partners.

Thanks to the financial support from EEP zoos, and other organizations the VCF managed to establish an effective EEP coordination which kept the specialized breeding centre Vallcalent in Catalonia open for 2024 - we thank you for your support, without this the future of the Bearded Vulture in Europe would look bleaker!

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INTRODUCTION

In 1978, the Bearded Vulture Reintroduction Project started in the Alps (FZG 832/78; WWF 1567/78) based on a captive breeding programme. This Bearded Vulture captive breeding network has been included in the European Endangered Species programme (EEP) since the EEP began, and is a VCF-coordinated network of zoos, animal parks, captive breeding centres and private collections aiming to breed this species in captivity for conservation purposes. In 1978, it was clear that only offspring from Zoos could be used, because the autochthonous populations were threatened.

One of the first objectives of the Bearded Vulture captive breeding program was to ameliorate the breeding success of the captive population. This would primarily satisfy the needs of the zoos, stop the importation of wild birds and assure a minimum production of chicks per year for the release. To achieve this first objective a breeding centre was created on the outskirts of Vienna, Richard Faust Breeding Zentrum (RFZ) with the function to coordinate the whole program, to study behaviourally problematic birds, obtain information about the needs of this species to maintain in captivity in well conditions, to reproduce with them and finally develop the housing guidelines for this species. At that time nearly 40 Bearded Vultures were still distributed throughout European zoos, including only one successful breeding pair. From the beginning, it was possible to convince European zoos to cede their birds for this conservation goal and to transfer most of these birds to the Richard Faust Zentrum in Austria. When birds where paired and juveniles were produced at RFZ, they went back to the zoos, and so from 1978-1985 the European breeding network emerged and was a precursor of the later established EEP.

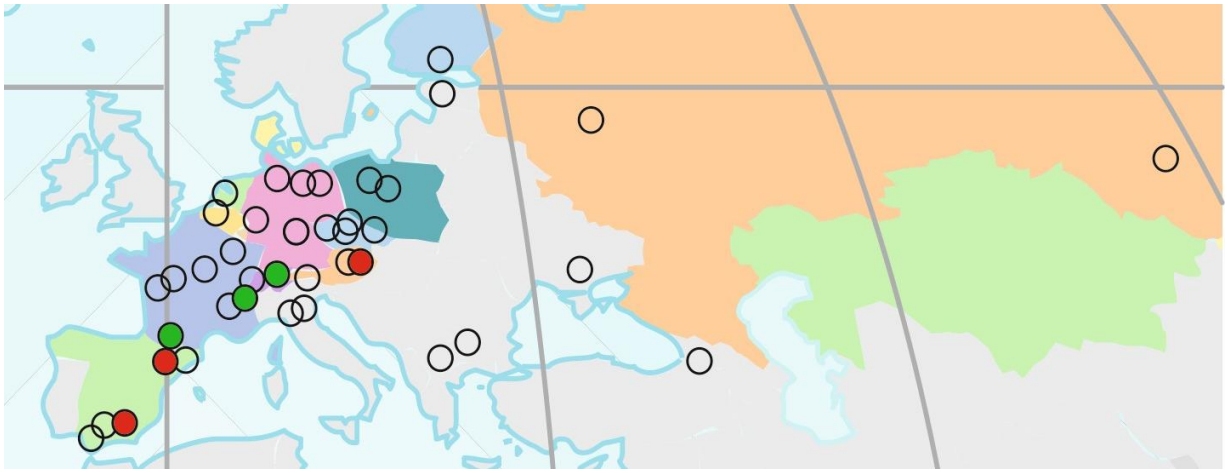
The Bearded Vulture EEP network is composed of a vast number of different types of institutions: private and municipal Zoos, private collections, NGO and Governmental wildlife recovery centres, and several of them are not EAZA (European Aquaria and Zoo Association) members. That's why an international foundation structure (Vulture Conservation Foundation) was created to make sure that all partners accept, respect, and follow the guidelines of the EEP. The Vulture Conservation Foundation´s final goal is to restore the species across its former range in Europe, and establish a 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).

The goals of this program are to create a captive stock as genetic reserve and at the same time build an ex-situ genetic reserve from European autochthonous endangered populations (Pyrenees and Corsica). Further to produce chicks able to reproduce as they get sexual maturity and appropriate for the reintroduction, because the final goal of the captive network is the conservation in situ, establishing a wild population capable to survive and reproduce, independently of human intervention. That's why the Logo of the Bearded Vulture EEP is: Quality before Quantity.

Because pair formation in Bearded Vultures can be complicated and dangerous, the EEP decided that it was necessary to create a distinction between centres dedicated exclusively to breeding (zoos and private centres) and centres dedicated to breeding and pair formation (Specialized Breeding Centres: SBCs). The role of the former is to house already established pairs and to breed the maximum number of offspring from them, while the latter, is where specialized staff are responsible for establishing new pairs, taking in new founders (injured birds from the wild), adopting chicks, housing problematic birds, and creating a genetic reserve by receiving specimens from all genetic lineages that make up the EEP. Further in 2018 regarding the losses that the EEP suffered in 2017 (West Nile Virus and aspergillosis), it was necessary to draft a new bird distribution strategy between the Specialized BV captive breeding centres (SBC). This distribution takes in account the potential,

resources, geographical location and the specialization of each SBC, and additionally its supply capacity on birds for the vicinity reintroduction projects.

Thanks to this structure the number of yearly produced chicks increased continuously having currently a captive stock from 193 birds - 90.16% of these are owed by the VCF (174 individuals, 79 males and 95 females) - distributed in around 31 (mainly European) zoos, 2 recovery centres, and 3 large (red spots) and 4 smaller (green spots) specialized captive breeding centres. There are 89 males with an average age of 15.1 years old (range from 1 years to 46 years old), 102 females with an average of 14.2 years old and (range from 47 years to 1 year old) and 2 birds born in 2024 with unknown sexes (see table 1 & 2 in Annex).

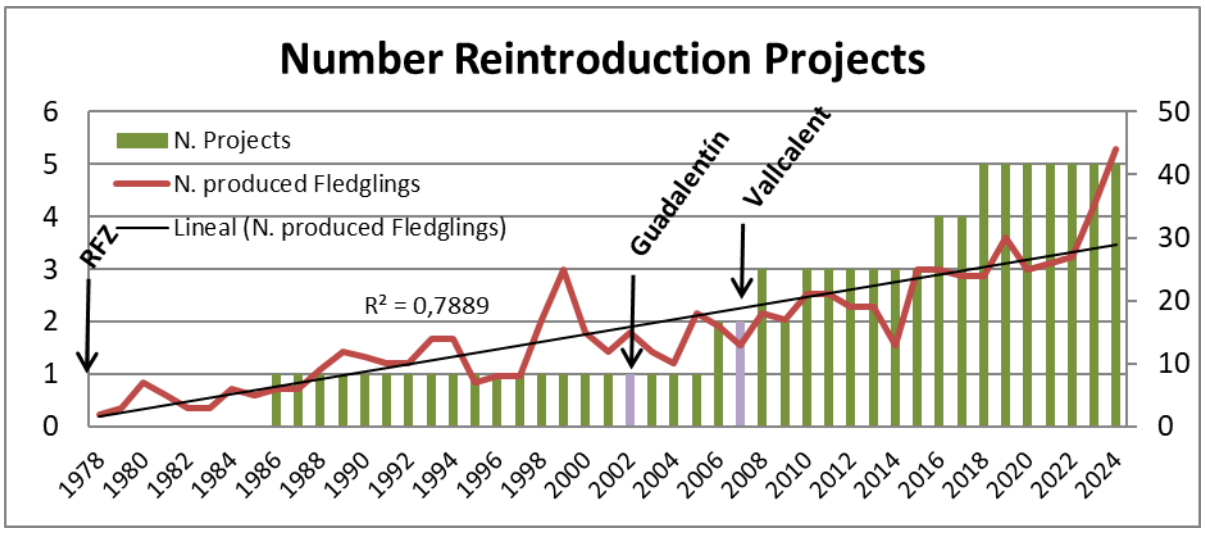


The distribution of the captive stock over many Zoos lowers bulk risks, e.g. epidemic diseases (December 2024).

The yearly increase on chicks' production makes possible to expand the initial goals and start other reintroduction projects. Nevertheless, in took 20 years between the first release in the Alps, which took place in Austria in 1986, and a second reintroduction project could start. This was in Andalusia in 2006. Afterwards the waiting time for starting a new project has significantly shortened, being possible in 2008 to start a third reintroduction project in Sardinia. Unfortunately, it was necessary to stop the project at the same year because of different internal/release problems. In 2012 Grands Causses (France) could receive first nestlings and three years later a reinforcement project started at the Corsican Island where the population is near verge of extinction. The last but not the least reintroduction project started in 2018, in Maestrazgo (Spain), with the goal to establish a bridge between the Andalusian reintroduced population and the wild Pyrenean one, the same as Grands Causses for the Pyrenean and the Alpine population. In 2021, Berchtesgaden NP, in Germany, also started to release young Bearded Vultures, as part of the Alpine reintroduction project.

The substantial increase in number of projects over the last decade is due to the presence of two new Specialised Breeding Centres (see graphic below). Further, thanks the new advice service from the VCF, giving the opportunity EEP-partners after request to receive in situ a visit from a specialist, to help ameliorate the housing conditions and train the staff, the average age of death during the last 12 years at the Breeding Centres (zoos, private collections and recovery centres) could be increase from 15.1 years old (n= 69 birds; 1978-2011) to 19.0 years old (n= 42 birds; 2012-2024). Additionally, all new partners before receiving birds need to have aviaries which follow the housing guidelines of the EEP. All above mentioned made it possible to reduce the death of birds and increase the captive population and the number of breeding pairs. However, with all this effort, it has not been possible to ameliorate the breeding success at the zoos (0.43 fledglings/breeding pair), more than half as low as in the SBCs (0.99 fledglings/breeding pair). This is due of the special reproduction biology of the species

(late sexual maturity, high level of aggressiveness during breeding season, cainism behaviour by chicks, special diet and feeding behaviour of chicks, etc.) and that zoos, by holding in average only one breeding pair, it takes many breeding years for them to gain experience.



Since 1986, where first release took place in Austria, 426 nestlings have been used for in situ projects. 260 nestlings have been released in the Alps and pre-Alps, 94 in Andalusia, 40 in Grands Causses, 12 in the Corsica Island, three in Sardinia and 17 in Maestrazgo. The rest of the produced birds were included in the captive breeding network (291). The first reproduction of Bearded Vulture in the wild occurred in 1997 (France) and until 2024, 522 nestlings have fledged in the Alpine mountains, more than released birds. In 2015 a great event was achieved by the Andalusia Bearded vulture reintroduction project: after nine years of releases the first chick hatched in the wild from a female that was only five years old. Furthermore, in the framework of the LIFE project GypConnect, in 2022, a pair in Vercors release site (French pre-Alps) produced its first chick which fledged with success, and in 2024, for the first time mating and nest building could be observed a pair in Grands Causses.

BREEDING RESULTS 2024

2024 has been the year with the highest production in the history of the EEP, with a total of 44 fledglings. Such success is largely due to the unusual proportion of fertile eggs. This is the second year in a row that the EEP breaks the record of chick production, since in 2023 the total number was 35. The Richard Faus Zentrum in Vienna also broke the record of fledglings in one centre with 14 chicks that reached the juvenile age. This fulfils the good predictions of previous years and confirms the good health of the captive breeding programme.

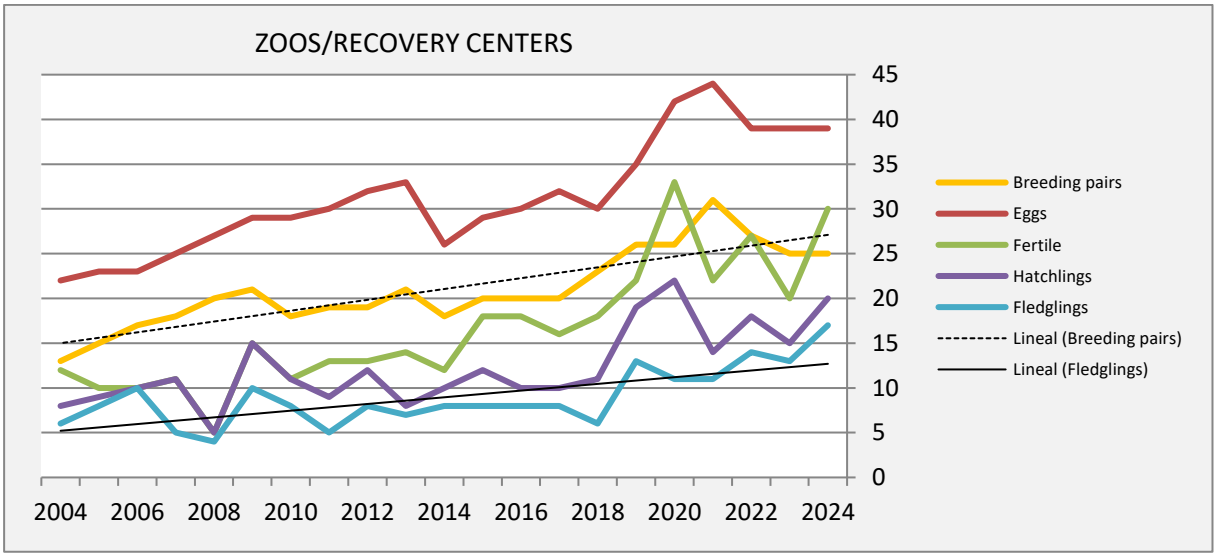
During the breeding season 2023-2024, eight experienced pairs have failed, as expected considering the age of the birds (n. laid eggs): Tierpark Friedrichsfelde (2), Chomutov (1), Green Balkans (1), Liberec old pair (2), Nuremberg (1), Parco Natura Viva (0), Puy du Fou (2) and one pair in CC Guadalentín (the male injured female). The pair from Chomutov Zoo it failed because it had to be moved urgently to a different aviary because of problems in their enclosure. On the other hand, five pairs have produced a chick for the first time in 2024, two in Richard Faust Zentrum (RFZ), one in Novosibirsk Zoo, one in Pairi Daiza and one in Centre de Fauna de Vallcalent (CFV). This last one is the first pair in the history of EEP in which both members are of Pyrenean origin, as well as being founders.

In conclusion, in 2024, 45 bearded vulture laying pairs (included one foster pair) laid 75 eggs, of which 49 hatched and 44 survived. From these 44 fledglings, 29 came from the specialized captive breeding centres (25 laying pairs; included one foster pair), and 15 from Zoos, recovery centres and private collections (20 breeding pairs). 11 fertile eggs didn't hatch, 4 chicks died during the hatching and 5 died afterwards.

In addition, two chicks born in Guadalentín breeding centre were exchanged with the Fundación para la Conservación del Quebrantahuesos (FCQ), that is making a reintroduction in Picos de Europa and Sierra de Gredos, and released in Andalusia, to improve the genetic variability in both projects.

24 nestlings were released, and 20 birds (10 males, 8 females and 2 whose sex is unknown) were added to the breeding network. One of these females, who was born blind, died in October. Thanks to this record on produced chicks, it was possible to offer the maximum number of birds to each release site and at the same time include a high number of birds inside the EEP. The 24 released fledglings were distributed in 5 ongoing projects as follow: 8 in the LIFE Gyp'Act Project (4 in Grands Causses, 2 in Baronnies and 2 in Vercors release sites), 6 in Andalusia (3 in Cazorla and 3 in the new releasing site in Sierra Nevada), 3 in Maestrazgo, 5 in the Alps (3 in Switzerland and 2 in Berchtesgaden) and 2 in Corsica within the GypRescue project.

The breeding results from 2024 shows that the Bearded Vulture EEP has a solid base and, even if several experienced couples fail, it has a positive trend, with forecasts for the coming years being very encouraging (see figure).



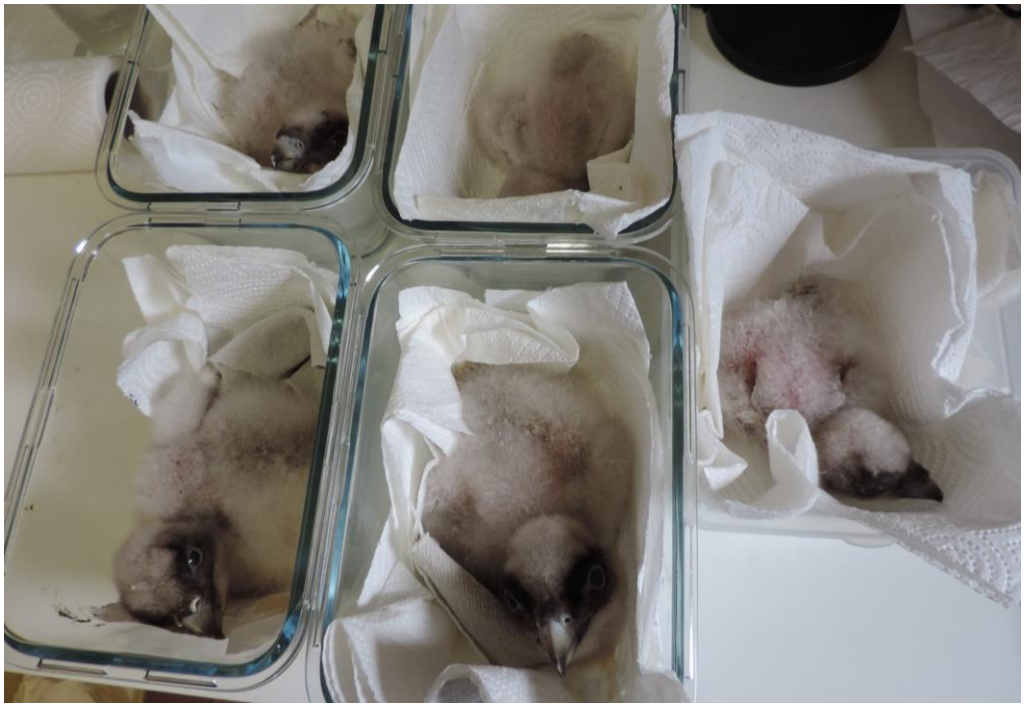
Specialized captive breeding centres

- Richard Faust Bartgeier Zuchtzentrum (RFZ) - Eulen- und Greifvogelstation Haringsee (EGS).

The RFZ, headquarters of the EEP and with a captive stock of 33 birds on the 31st of December 2023, is specialized in the reproduction with founder birds. Further RFZ was responsible to establish the guidelines for captive breeding of this species and to determine the best release method for Bearded Vultures.

2024 has been a record year for RFZ in all senses: their 9 breeding pairs (excluded the foster pair) laid a double clutch, and all 18 eggs were fertile. One of them aborted, two of them died during hatching process and one

more died during the first week. As a result, 14 chicks were successfully raised, something never achieved before in any other centre. Furthermore, 3 chicks from other centres were adopted there during 2024.



5 Nestling hatching in the incubators before being adopted in RFZ.

Two pairs reproduced for the first time. The old male BG201 and the unexperienced female BG576 produced a chick for the first time this season, only six months after being paired. She laid a double clutch and both chicks hatched, but the first one, BG1222, died due to a yolk sac infection. The second one, BG1228, was transferred to Nuremberg zoo for being adopted there, due to the lack of available pairs in RFZ (his parents adopted another chick). The pair formed by the male BG594 and the female BG892 (one of the only three descendants of a Pyrenean founder), also reproduced for the first time, getting two genetically valuable chicks. Out of these four parents, only the male BG201 had offspring previously.

Seven more pairs laid a double clutched, all of them experienced. One of the eggs of the pair BG108 x BG175 aborted in the incubator. Their clutch was removed because the female got fell ill with a severe ear infection. The two chicks from the pair BG399 x BG278 died during hatching. The rest of egg hatched, and the chicks were reared successfully.

Six of the birds that were born in RFZ were released and the other eight were kept in captivity for breeding. The chick that survived from the pair BG108 x BG175, the male BG1198, was released in Baronnies, in France. From pair BG080 x BG518, the male BG1218 was kept in captivity and transferred to Centre de Fauna de Vallcalent in Spain in October, and the male BG1227 was released in Berchtesgaden, in Germany. From pair BG681 x BG560, the male BG1224 was also transferred to Vallcalent, and the female BG1234 was released in Melchsee-Frutt, Switzerland. From pair BG087 x BG547, both descendants were females and were kept in the breeding network: BG1226 was sent to the specialised breeding centre of Parc Animalier des Pyrénées, and the female BG1236 was

sent to Zie Zoo, in the Netherlands. The only surviving chick from pair BG201 x BG576, the male BG1228, was raised by the pair BG018 x BG336 of Nuremberg Zoo and stayed there. From pair BG857 x BG835, the male BG1232 was kept for breeding and sent to Zie Zoo together with BG1236, and the female BG1239 was released in Corsica. From pair BG468 x BG381, the female BG1233 was released in Corsica too, while the female BG1241 was transferred to Schönbrunn Zoo. Finally, from pair BG594 x BG892, the female BG1245 was released in Sierra Nevada, Spain, and the male BG1250 was transferred to breeding area of Green Balkans Rescue Centre, in Bulgaria.

Three more chicks, born in other centres, were adopted and raised in FRZ: BG1246 and BG1247, two females born in Tallinn Zoo, in Estonia, were transported to RFZ to be adopted there, at the age of 78 and 71 days respectively, due to problems in their rearing (see Tallinn Zoo). The first one stayed in RFZ and the second one was released in Sierra Nevada, Spain. The chick from Pairi Daiza Zoo, the male BG1252, was also transported there after his sibling died in the nest. It was first sent to Asters' breeding centre, but the double adoption with pair BG700 x BG627 failed, so the bird was brought back to Pairi Daiza, where the next-box protocol was implemented, until new CITES certificate were expedited because the destination had to be changed. Then it was sent to RFZ and adopted successfully by the old female BG006 and finally transferred to Schönbrunn Zoo with BG1241 for breeding purposes.

The oldest bird of EEP breeding network, the female BG006, adopted and raised successfully three different chicks in RFZ, despite being 46 years and half blind, proving the importance of old birds withing this breeding programme. She was paired with BG327 and laid an infertile egg. On the 13th of march, the inexperienced male was removed and BG006 adopted the chick BG1233. When the three months old birds from Tallinn Zoo arrived on the 4th of June, with strong signs of imprinting, she adopted the oldest, BG1246, even though the chick was aggressive with her at the beginning. Later, on the 20th of June, the chick from Tallinn was placed on the second nest and the chick BG1252 from Pairi Daiza was put in her main nest, after a failed double adoption by pair BG201 x BG576, and BG006 adopted him without problems. Working with a species where pairs can lay two eggs but cainism is compulsory, and very often some pairs lay but are not able to raise their offspring for a variety of reason, the role of these experienced old birds as foster parents is essential.

Old female BG006 and BG1246 during the first moments of her adoption by BG006.

- Centro de Cría de Guadalentín (CCG)

The CCG, with a captive stock of 27 birds (13 males and 14 females) on the 31st of December 2023, is the basis of the Andalusia Bearded Vulture reintroduction project. One of their pairs with experience had to be dissolved because the BG410 attacked the female BG290 damaging her right eye. The other 6 experience pairs of this centre laid a double clutch. In total, six pairs produced 12 eggs, all of them fertile. One chick died during hatching and another one during the adoption, so in total CCG produced 10 chicks this season, 3 males and 7 females.

All clutches were removed and chicks hatched artificially in the brooder, the pairs received dummy eggs to keep them incubating or a chick for adoption. Artificial incubation is carried out according to the protocol established for the species, being one of its peculiarities to expose the eggs four times a day for 5 minutes at an outside temperature. The ten chicks were raised by 5 pairs in double adoptions, and 6 of them were released in three different release sites: 1 in Maestrazgo, 3 in Grand Causses, and 2 in Vercors. 2 more were exchanged with the Fundación para la Conservación del Quebrantahuesos, FCQ, and released in Picos de Europa NP, in the north of Spain. In exchange, two chicks from the Pyrenees, BG1219 and BG1248, hatched in the centre run by the FCQ in Aragon, were reared in Guadalentín breeding centre. Both were released in Andalusia, one in Sierra Nevada and one in Cazorla.

From pair BG313 x BG330, the male BG1216 was exchanged with the FCQ and released in Picos de Europa NP, in Spain, and the female BG1229 was released in Vercors, in France. From pair BG391 x BG360, the hatchling BG1210 died before the external pip, and the female BG1221 was released in Vercors, in France. From pair BG337 x BG317, the female BG1202 was released in Grands Causses, in France, and BG1211 was killed by foster male BG590. At the beginning the male showed interest for the chick and started to warm it. Suddenly he stood up and attacked the chick, killing him. The male never has seen a chick before. From pair BG362 x BG389, the female BG1199 showed to be blind. Unfortunately, on the 1st of October, the fledgling died after falling into the water pool and drowning. The male BG1203 was kept for the captive stock and pendent to be transferred to Tierpark Friedrichsfelde where a female waits him. From pair BG124 x BG329, the female BG1202 was released in Grands Causses, in France, and the male BG1206 was exchanged with the FCQ and released in Picos de Europa NP, in Spain. From pair BG590 x BG658, the female BG 1245 was released in the new release site in Sierra Nevada, in the framework of the Andalusian reintroduction project, and the male BG1250 was transferred to Green Balkans recovery centre, in Bulgaria.

Left: Female BG290 injured by male BG410. Right: Chick BG1211, killed during adoption.

- Centre de Fauna Vallcalent (CFV)

This centre is one of the four rehabilitation stations with Veterinarian hospital from the Generalitat of Catalonia, located in Lleida (Spain), and has a Bearded Vulture captive breeding Unit, which is managed by the VCF through the EEP species coordinator (staff from the Vulture Conservation Foundation). One of its priorities is to get offspring from difficult birds, which did not reproduce elsewhere, regardless of quantity as is the case of the Guadalentín Breeding Centre (Andalusia, Spain). Furthermore, to treat wild recovered injured birds and to conduct studies/analyses of new treatments as well as prophylaxis.

At the beginning of the breeding season, 20 birds were housed in CFV facilities, four of them from the Pyrenees. Four pairs laid five eggs, one was infertile, one aborted and three hatched. The three chicks were kept in captivity for their genetic value. A fourth chick, born in Torreferrusa rescue centre, was raised in CFV and released in Switzerland.

The pair BG652 x BG680 produced a chick this season for the first time. This is a very important milestone within the EEP, since both parents are founders from Pyrenees so their descendant, the male BG1230, is the first chick 100% Pyrenean born with the breeding network. I was adopted and raised by the most experienced pair of the centre, BG297 x BG115, and was transferred to Parc Animalier des Pyréneés, a centre that is excellent for keeping genetically valuable birds for its location. The Pyrenean pair was given the second chick born in Torreferrusa rescue centre so they could gain experience, and they raised it perfectly.

The pair BG1091 x BG588, whose components are also genetically very important, copulated successfully and laid an egg for the first time in 2024, but unfortunately aborted.

The two remaining pairs produced one chick each. The oldest pair, BG297 x BG115, laid two eggs, but the second rotten in the nest. The first one was incubated artificially and four days after hatching was adopted by the imprinted male BG368. The chick, the female BG1200, was sent to Córdoba Zoo together with the male from Asters breeding centre BG1244 to create a new breeding pair. The pair BG371 x BG456, that reproduced for the

first time the previous season, laid one egg that was entirely incubated by themselves and hatched in the nest. Unfortunately, the next day the chick, the female BG1205, looked weak and has to be removed from the nest and received antibiotic treatment. It was replaced by a dummy egg that was accepted by both parents. Four days later the chick was taken back to her nest and adopted by the male, but the female reacted aggressively to the chick and had to be removed. BG1205 was raised by the male and stayed in Vallcalent breeding centre, where has been paired with male BG1179 from 2023.

BG297 and BG115 with BG1230, the first chick 100% pyrenean born within the EEP breeding network.

BG652 and BG680 raising their first chick in CFV, BG1212.

- Breeding centre Asters (Conservatoire d´Espaces Naturels Haute Savoie)

Asters' centre is located at 700m a.s.l. in Sallanches (near Montblanc, France), giving the best climatology conditions for the species, and has the function to house birds from less common blood lines inside the EEP. At the end of 2023 the centre was keeping four pairs, one of them still young to reproduce. They laid four eggs, but only the pair BG700 x BG627 laid two fertile eggs. The other two pairs laid one infertile/putrefied egg each. One of these fertile aborted, the other one hatched in the incubator and was adopted by the more experienced pair BG454 x BG502. It was transferred to Córdoba Zoo and paired with BG1200 from Centre de Fauna Vallcalent.

The chick born in Pairi Daiza, BG1252, was brought to Asters to try a double adoption with this pair, but it didn't work and the chick was finally raised in Richard Faust Zentrum in Viena.

Breeding Centre Asters in Sallanches, France.

- Bearded Vulture Breeding Centre in Natur und Tierpark Goldau

At the end of 2023 the centre was keeping one adult pair, one young pair and four young birds. The adult female laid one egg that was exchanged for a dummy egg after 43 days of natural incubation for artificial hatching. The chick, the male BG1220, stayed in Goldau to be paired with the young female BG1106.

- Parc Animalier des Pyrénées (France)

Located in the French Pyrenees, this parc built in 2022 a specialised breeding centre at 500m from the zoo, offering a place to house birds of high genetic value for the EEP (less common blood lines in the captive network), in climatic conditions that are more suitable to the species. It consists of four double aviaries and a building which includes a small office, nursery and a warehouse for storage and prepare food.

At the end of 2023, the centre housed one breeding pair, one young pair and two young females. The adult female laid one egg, but the chick died during hatching.

The four double aviaries of Parc Animalier de Pyrénées bearded vulture breeding centre, located in the core of Pyrenees.

☞ **Summary** 25 laying pairs in the specialized captive breeding centres laid 42 eggs. 38 showed to be fertile and 31 hatched successfully. Finally, 29 nestlings fledged with success (12 males and 17 females). From these 29 birds, 14 (3 males and 11 females), have been released at the following sites: 2 in Andalusia, 1 in Maestrazgo, 1 in Berchtesgaden, 2 in Corsica, 3 in Grand Causses, 2 in Vercors and 1 in Baronnies, and 2 in Picos de Europa (exchanged for the two chicks from *Fundación para la Conservación del Quebrantahuesos* released in Andalusia).

Zoos, animal parks, recovery centres & private collections

- Zoos & animal parks and recovery centres

The Zoos play a crucial role in the EEP and the conservation of Bearded Vultures. Although the success rate is on average lower than in the specialized breeding centres, they 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 public awareness about the species. The zoos help to build core support for vulture conservation that would otherwise be impossible to achieve.

They are supported directly by the EPP coordinator. If needed, they receive daily advice about the possible problems that may arise, like temperature regulation, digestion problems, medication, adoptions, nest control or the amount of food that the chicks must receive, to ensure that the chick is raised in the best conditions.

31 mostly European zoos, three recovery centres and one private collection housed 85 birds on the 31st of December 2023. From these, 20 pairs have laid 33 eggs. 26 showed to be fertile and 18 hatched. Finally, 15 nestlings fledged with success.

Two pairs produced a chick for the first time in Novosibirsk Zoo (Russia) and Pairi Daiza (Belgium), and one pair in Jerez Zoo (Spain) laid their first clutch in 2024, although the egg was infertile. On the other hand, two pairs belonging to zoos have been lost during this season due to the death of one of the members: one in Parco Natura Viva (Italy) and one more in Liberec (Czech Republic).

Eight fertile eggs didn't hatch: 2 in Ostrava Zoo (Czech Republic), one of each pair, but both laid a double clutch and the other chick survived; 1 in Puy Du Fou (France), 1 in Nuremberg Zoo (Germany), 1 in Green Balkans Rescue Centre (Bulgaria), 2 broke in the nest in Novosibirsk Zoo, and 1 hatching egg was destroyed during the night by the pair in Montowl (Italy), when it was returned to their parents for natural hatching. By nest control next morning only a few eggshell fragments could be found. Three chicks died: one during the hand rearing period in Belgrade Zoo and two died in the nest in Pairi Daiza and Chomutov Zoo (Czech Republic). Furthermore,

Alpenzoo (Austria), Beauval Zoo (France), Belgrade Zoo (Serbia), Tierpark Berlin Friedrichsfelde (Germany), Helsinki Zoo (Finland), Novosibirsk Zoo and Pairi Daiza produced respectively 1 chick each, meanwhile Liberec Zoo (Czech Republic), Ostrava Zoo (Czech Republic) and Tallinn Zoo (Estonia) produced two. Regarding the recovery centres, Torreferrusa (Spain) had 2 chick this year.

The breeding pair from Berlin Zoo (Germany) and Parco Natura Viva (Italy) didn't lay eggs this season.

One more year, Tallinn Zoo followed the Nest-Box protocol established in 2020 during the pandemic to rear their two chicks, due to difficulties in transferring the chicks for adoption to other centres. Following behavioural problems detected in the chicks of this pair in previous years due mainly to the lack of attention of the parents to the chicks in the nest-box, together with the difficulties to transfer the chicks to another centre to be adopted, this year both chicks were transported by car to be adopted in Richard Faust Zentrum at the age of 78 and 71 days respectively. They showed signs of imprinting upon arrival, reacting aggressively towards their adopters and seeking human companionship. These signs could be reversed in the youngest one, who was finally released in Sierra Nevada, but the oldest one had to stay in captivity because, even though he accepted the foster bird, the nestling still showed interest in humans.

The following fledglings born in zoos and rescue centres have been released:

- Female BG1201 from the youngest pair of Ostrava Zoo was released in Baronnies (France).
- Both birds born in Torreferrusa Rescue Centre: male BG1212 in Melchsee-Frutt (Switzerland) and female BG1209 in Cazorla (Spain). BG1209 was predated by fox in the hacking cave.
- Male BG1213 from Beauval Zoo was released in Melchsee-Frutt as well.
- Female BG1214 from Liberec Zoo was released in Maestrazgo (Spain).
- Female BG1225 from Alpenzoo was released in Maestrazgo too.
- Female BG1237 from Tierpark Berlin Friedrichsfelde was released in Sierra Nevada, Andalusia (Spain).
- Male BG1240 from Helsinki Zoo was released in Berchtesgaden N.P (Germany).
- Female BG1242 from the oldest pair of Ostrava Zoo was released in Grand Causses (France).
- Female BG1247 from Tallinn Zoo was released in Cazorla, Andalusia (Spain).

Five fledglings stayed in captivity: female BG1204 from Liberec Zoo, BG1223 from Belgrade, whose sex is unknown, female BG1243 from Novosibirsk, female BG1246 from Tallinn and male BG1252 from Pairi Daiza. The descendants from Belgrade and Novosibirsk zoo had to remain in captivity because due to various restrictions, they could not be imported into the EU. The older nestling from Tallinn zoo, due to human socialisation too, being not possible to release. And the nestling from Pairi Daiza, being the first descendant from this new breeding pair and following the guidelines established for the Bearded Vulture EEP, the first four descendants from new pairs are included in the EEP to maintain the genetic information of the parents in the breeding programme. The nestling from Liberec zoo was included in the EEP to form a couple for Tierpark Berlin Friedrichsfelde.

This new record on breeding success for 2024, 0.68 fledglings/laying pair (average 0.43 fledglings/laying pair 2004-2024), it has been possible thanks to the good coordination between the zoos and the coordinator, with daily exchanges of information on the development of their chicks, being able to advise immediately when needed. If the rearing was not working, immediately solutions were proposed by the coordinator, coordinating transfers of chicks for adoption among EEP partners.

Left: the breeding pair of Beauval Zoo BG763 x BG635, whose chick was released this year for the first time. Right: the breeding pair of Pairi Daiza BG664 x BG659, that produced chicks for the first time in 2024.

☞ **Summary** 20 breeding pairs in the zoos/recovery centres laid 33 eggs, same number than last year, but the number of the fertile eggs was much higher, 26 (11 more than last year). 18 hatched and 15 nestlings fledged with success (3 males, 9 females and 2 whose sex is unknown). From these, 10 birds, 2 males and 8 females have been released and the remaining 5, three females, one male and one bird whose sex is still unknown, has been kept in captivity.

In conclusion, in 2024, 45 bearded vulture laying pairs (included one foster pair) laid 75 eggs, of which 49 hatched and 44 survived (see Table 3 in Annex - Breeding pairs in 2024). This fertility rate, 86,48%, is much higher than the average 69,01%, which explains the high breeding success of season 2023-2024. From these 44 survived fledglings, 24 nestlings were released, the maximum previewed: six in Andalusia (four in Cazorla and two in the new releasing site in Sierra Nevada), eight in the framework of the LIFE project GypConnect (four in Grands Causses, two in Baronnies and two in Vercors), three in Switzerland, two in Germany (Berchtesgaden, a new release site included in the Alpine project), two in Corsica and three in Maestrazgo. The remaining birds, 20, were added to the breeding network (see Table 4 in Annex – Offspring in 2024). From these 44 fledglings, 29 came from the specialized captive breeding centres (25 breeding pairs), and 15 from Zoos, recovery centres and private collections (20 breeding pairs).

Breeding results 2024 overview:

	LayingPairs	Eggs	Fertile E.	Hatchlings	Fledglings
SBC's	**25**	**42**	**38**	**31**	**29**
Richard Faust	10*	19*	18	15	14
Guadalentín	6	12	12	11	10
Vallcalent	4	5	4	3	3
T.Goldau	1	1	1	1	1
Asters	3	4	2	1	1
Parc Animalier	1	1	1	0	0
BC's	**20**	**33**	**26**	**18**	**15**
Zoos/Priv.	18	30	23	16	13
Recovery Centers	2	3	3	2	2
TOTAL	**45**	**75**	**64**	**49**	**44**

**1 Foster pair included*

LOSES	*incubation (fertile eggs)*	*before internal pick (fertile eggs)*	*hatching*	*adoption*	*rearing*	*Total*
SBCs	*2*	*2*	*3*	*1*	*1*	***9***
BCs	*6*	*1*	*1*		*3*	***11***
TOTAL	***8***	***3***	***4***	***1***	***4***	***20***

One of our protagonists photographed by Hansruedi Weyrich.

TRANSFERS / INCREASES / LOSSES

Transfers

The final goal of bird transfers is to increase the genetic variability of the captive stock, and at the same time assure in the long term a minimum number of chicks produced per year to satisfy the ex-situ (captive breeding network, EEP) and in-situ (birds release) needs. Therefore, the number of breeding pairs must at least be maintained, and this can be only achieved by building continuously new pairs for replacing potential future loses or breeding failures and assure a minimum yearly production of chicks. In general, the pair bonding scheme is drafted at the same time when the destination of the descendants is determined; genetics and location are the most important criteria to be considered.

During 2024 the transfer of 30 birds (13 males and 17 females) could be done within the EEP network, with the goal to create 14 new pairs.

CF Vallcalent, after finishing the construction of 3 double aviaries in 2023, received 12 birds in 2024. The pair BG973 and BG1010 from Guadalentín breeding centre, arrived on the 11th of March and was placed in the area of Vallcalent centre that can be visited, since this pair (brother and sister) have a congenital defect of the feathers

and can't breed. The male BG1180 Marco, who was released in Melchsee-Frutt in Switzerland and had to be captured because he showed behavioural problems, arrived from Tierpark Goldau to Vallcalent on the 13th of May and was paired immediately with the female BG1194 Gypaillette, to try to correct his behaviour problems and create a breeding pair. The female BG1020 also was transferred from Tierpark Goldau on the same date, for pair bonding. On the 10th of October, in a big transport that moved 11 bearded vultures between five centres, eight more birds arrived to Vallcalent: the three birds from Monticello Montowl, the pair BG234 x BG397 and the female BG620, were transported to CFV after the closing of the centre; four more birds from Richard Faust Zentrum for pair bonding too, males BG1218 and BG1224 and females BG1048 and BG117; and finally, the female BG1191 from Parc Animalier des Pyrénées arrived to be paired with one of the young males from RFZ.

On the 20th of March, the male BG1168 Dagobert was transferred from Schönbrunn Zoo to RFZ. Born in 2023 in RFZ, this bird was transferred to Schönbrunn together with the female BG1183 Lotte. In October the female was taken to the Veterinary University of Vienna to be treated for an Aspergillosis infection and died in December of the same year. The male started to show a strange behaviour, mobbing the keepers and remaining seated on the edge of the water bath. For this reason, it was taken back to RFZ. In exchange, on the 23rd of July, Schönbrunn Zoo received another young couple from RFZ: the female BG1241 and the male BG1252, born in Pairi Daiza and raised in RFZ.

On the 27th of May, the female BG321 Veronika, was transferred to RFZ. Released 1999 in Switzerland, she was found unable to fly in 2023 and treated in Natur und Tierpark Goldau. She has a severe arthritis in the right shoulder joint that affected the bone seriously, so she was declared unreleasable and included in the EEP.

On the 13th of June, the male BG1244 from Asters was transported by car to the Spanish border by Asters' keepers, where they met with staff from Córdoba Zoo who pick it up and drove to Vallcalent. The next day they took this bird and the female BG1200 born in Vallcalent and transported this new young pair to Córdoba Zoo. This zoo lost both member of its pair because of diseases in 2021 and 2022, the last one due to Avian Flu.

On the 17th of July, Zie Zoo (Netherlands), recently included in the bearded vulture EEP, received a young pair from RFZ, male BG1232 and female BG1236.

On the 3rd of September, the female BG1204 was transferred from Liberec to Tierpark Berlin Friedrichsfelde, to be paired with the male BG1203 from Guadalentín (who hasn't been transferred yet), a fill the empty aviary that has been empty since the death of the pair BG294 x BG292 in 2022.

On the 7th of November, the female BG1195 born in 2013 in Puy du Fou was transferred to Le Pal Zoo. Hopefully, they will receive a male for this female soon.

On the 29th of November, the female BG1189 born in RFZ was transferred to Nuremberg Zoo to be paired with the male BG1228, which was transferred as hatchling from RFZ to be adopted with the Nuremberg Zoo breeding pair.

On the 30th of November, two more of the 14 birds born in RFZ this year, male BG1250 and female BG1187 were moved to Green Balkans Rescue Centre in Bulgaria to become a breeding pair.

Finally, 5 birds were transferred to the new specialised bearded vulture breeding centre of Parc Animalier des Pyrenées: the male BG591,who was alone since the death of his female in 2022, arrived from the private collection of B. Slomann in United Kingdom on the 18th of January; the female BG1007 was transferred from Riga zoo (Latvia) on the 27th of September; and in October, in the same big transfer that took eight birds to Vallcalent,

this centre received three more birds: the male G1226 from RFZ, the female BG469 from Parco Natura Viva (Italy) and the male BG1230 from Vallcalent.

The transfers of two birds are still pendent: the young male BG1203 from CCG to Tierpark Berlin Friedrichsfelde and the female BG274 from Liberec Zoo to CCG. There are also three young birds that need to be moved, but they are in Novosibirsk and Belgrade, out of the European Union.

Uwe Wolf, specialised ins wildlife transport, arriving at Vallcalent with eight bearded vultures.

Increases:

In 2024, thanks to excellent breeding results, 20 young birds born this season (10 males and 9 females and one whose sex is still unknown) have been included in the EEP, with the goal to increase the breeding capacity of the EEP (see table 4 in annexes for more details). Unfortunately, one of these, the blind female BG1199 born in Guadalentín, died in October. Furthermore, an immature female from 2021, BG1253, descendant from the breeding pair in Almaty Zoo, could be transferred to Novosibirsk Zoo and included in the EEP. And finally, the female Veronika, BG321, released in the Swiss Alps 1999, had to be included in the EEP in 2024. The bird was recovered in October 2023 near Champéry CH being not able to fly. She was immediately transferred to Tierpark Goldau where X-rays were done. Although the bird was in a good nutritional condition, showed a severe arthritis in the shoulder joint, being not able to open the right wing. Finally, seeing that Veronika showed no improvement after long treatments with anti-inflammatory drugs, and being not able for a release, it was decided to transfer

to RFZ and include it in the EEP. As a remark, Veronika together with its partner, she contributed to 8 successful reproductions in the wild.

BG1230, the fist chick 100% Pyrenean born in the breeding network, at the age of 121 days with his foster parents.

Losses:

During 2024, 8 birds died within the EEP network, 3 males and 5 females. 3 of them died because of aspergillosis, one because of West Nile Virus infection, one because of a tumour in her middle ear, one suffered a renal failure, another one was put down because she was extremely weak due to a fibula fracture and osteoarthritis of the knee, and the last one, the blind juvenile, drowned after falling into the trough.

These loses won't traduce into a major impact on the EEP chick's production capacity in short term, since the existing number of potential breeding pairs is enough to keep it at the level of recent years. However, it's necessary to keep taking attention on the EEP needs in the coming years to avoid severe consequences in the long term, not only replacing the losses, but also adding males to compensate the current sex imbalance in the captive population, with 8 females without males.

On the 2nd of January, the male BG1170, only one year old, died at Green Balkans Rescue Centre, due to a severe generalised Aspergillosis.

On the 23rd of March, the 32 years old female BG175, from RFZ, died at the Veterinary University of Vienna, due to a tumour in the middle ear, after nearly three months of treatment. Together with her male BG108, between 2002 and 2024 45 eggs have been laid, from which 33 hatched and 29 survived, being the second most productive females inside the EEP.

On the 1st of June, the 19 years old male BG451 was found dead in his aviary in Parco Natura Viva (Italy), because of a renal failure. Together with his female BG469, between 2018 and 2023 produced 3 chicks. In the last breeding season no clutch was laid by the pair.

On the 17th of June, the female BG747 died at Parc Animalier des Pyrénées. She suffered a fractured fibula and osteoarthritis of her knee, stopped eating and became very week, being necessary to euthanise. On the 19th of March 2013, as a 39 old nestling suffered an attack by a genet (Genetta genetta) losing her left eye. The female started to reproduce in 2021. In 2023 she laid a double clutch and from both a chick hatched, being the one which hatched in the nest reared successfully by its parents.

On the 19th of September, the old male BG180 died of senility in Liberec zoo, at the age of 39 years. Analyses after his death showed that he had suffered from a WNV infection. The male was paired with the founder female BG274 and together between 2001-2024 they produced 51 eggs, from which 26 hatched and 19 fledged.

On the 25th of September, the one-year-old female BG1165 died from Aspergillosis at CFV. She fell from the nest when she was only three months old and suffered a tibio-tarsus fracture. She was operated and went through a long recovery process and got over several complications such as a post-surgical infection and a pododermatitis, But the extensive treatment weakened her, and she eventually fell ill with aspergillosis. She didn't recover from the anaesthesia of an endoscopy of air sacs.

On the 1st of October, the 8 months old female BG1199, who was born blind, drowned after falling in the bath pond of her aviary in Guadalentín breeding centre.

Finally, on the 8th of November, the 14 years old female BG634, died because of aspergillosis infection at Belgrade Zoo. Together with her male BG611, between 2018-2024 they produced 9 eggs, from which five hatched and two survived.

STATUS BEARDED VULTURE EEP

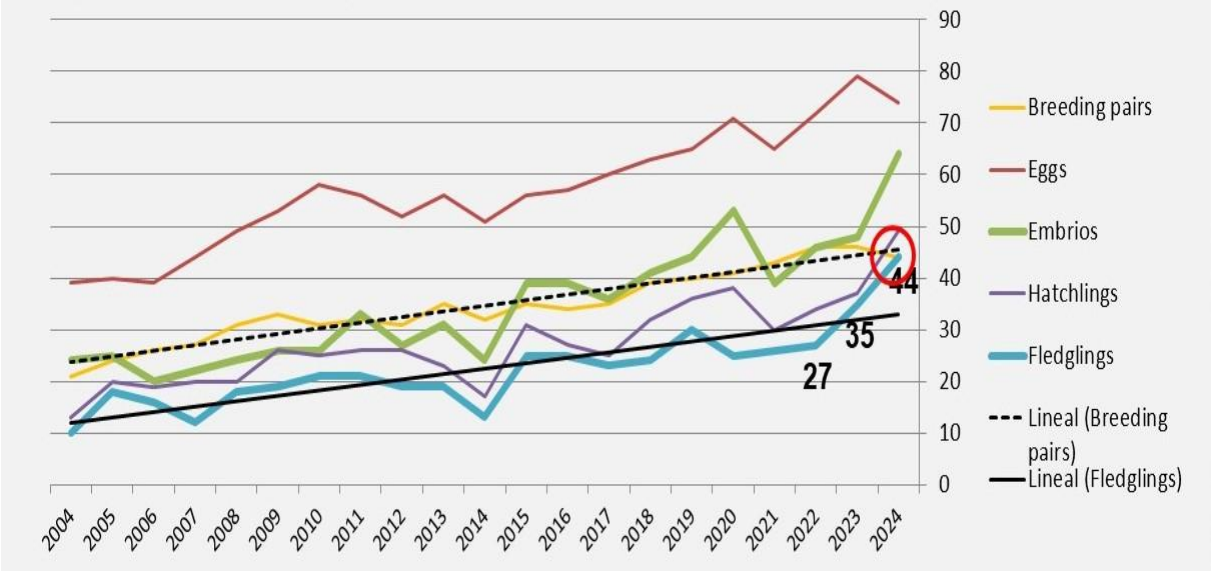
On the 31st of December 2024, there were 192 birds included in the EEP (13 more than 2023). From them, 89 were males, 102 females, 1 sex unknown. The average age has decreased due to the high number of this year's chicks included in the EPP but is still similar between males and females: for males 15.1 years old (range from 46 years to 1 years old) and for females 12.0 years old (range from 47 years to 1 year old). Even though there are very old birds, the average is still very low, showing the existence of a high number of young individuals (<7 years old), what represents the 29.16% of the total captive population (26 males and 30 females).

Further, the distribution of specimens in each age class between males and females keeps being similar, what gives a pyramid shape on age distribution and reflects demographically a very healthy and stable captive population (see annex table 2). The actual Bearded Vulture EEP population structure makes possible to guarantee a stable yearly production on chicks covering the EEP needs and the on-going reintroduction projects as well.

From the 7 experienced pairs which failed to reproduce in 2023, 4 failed again in 2024 (T. Friedrichsfelde, Liberec, Nuremberg, 1 in CCG), from which 2 pairs (Liberec and Nuremberg) are composed by birds more than 30 years old. Actually, nine breeding pairs are composed of aging individuals (>30 years), from which six reproduced in 2024, what represents 15,9% of the total reproduced pairs in 2024 (n= 44). Only one of the eight existing old females produced a chick, but she died in 2024 (BG175). In contrast seven from the 11 existing old males (BG080,

BG087, BG108, BG124, BG174, BG201, and BG207) produced a chick, showing once again that age in males does not influence fertility as much as it does in females. For this reason, whenever an experienced male loses his female, he is immediately paired with a young female, enabling him to help the young female gain breeding experience in a very short period of time. Nevertheless, the remaining 4 old males, one died during 2024, a second has mating problems, a third showed already mobility problems and only the last very old male (BG018, 46 years old) is paired with a young female which in 2019 produced their last chick, aborting 6 from the last 9 laid eggs.

In 2024 five new pairs produced for the first time a fledgling (2 pairs in Richard Faust Zentrum, 1 in Vallcalent, Novosibirsk and Pairi Daiza zoo respectively). These new pairs make possible to maintain similar number of breeding pairs (in 2023 47 laying pairs; 2024 45 laying pairs). However, the rest of the reproductive parameters have been much better in 2024 than in 2023, with 2023 setting a new record (in 2023 48 fertile eggs, 25 fledgelings; 2024 64 fertile eggs, 44 fledgelings). This increase is very well reflected in all reproductive parameters, especially in the total number of breeding pairs, showing a continuous upward trend (see graphic below).



This can be possible only because every year a minimum number of produced fledglings are included in the breeding programme, replacing old pairs that have stopped breeding and even increase the total number of breeding pairs. Consequently, the annual number of produced chicks has been positively affected, with a current number >25 fledglings/year, and even with a record during the last two seasons.

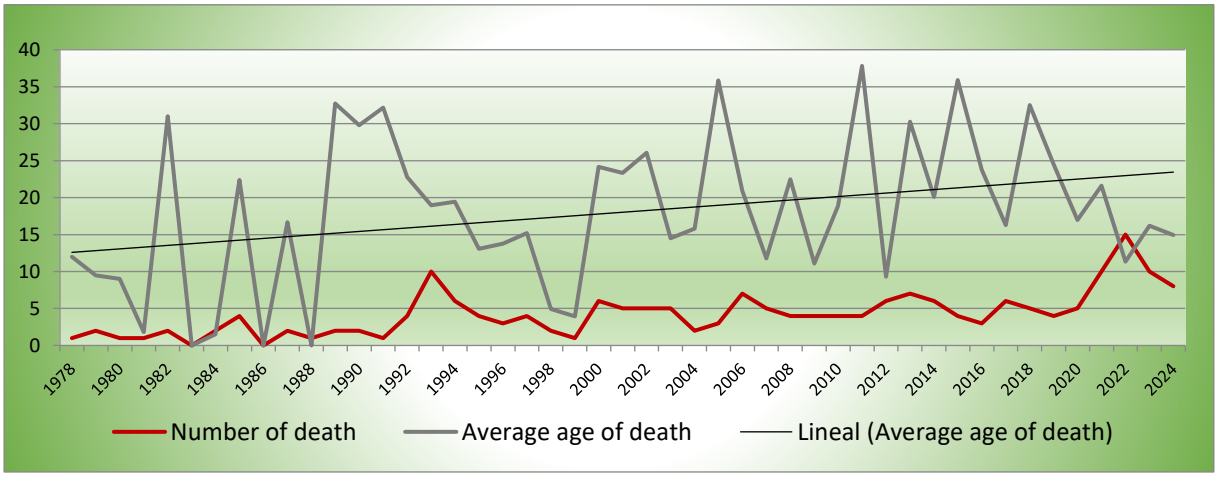
This strategy has made possible that during the last years the number of potential pairs which can produce a chick has been stable around 25 pairs (see table below).

Bearded Vulture EEP: results for 2024

Potential breeding pairs		2016	2017	2018	2019	2020	2021	2022	2023	2024
High probability	Number	7	6	8	7	10	10	9	8	3
	clutch	6	5	8	7	10	10	9	8	3
	hatchling	2	1	4	5	5	5	3	5	1
	fledgling	1	0	2	3	1	2	3	5	1
Medium probability	Number	13	12	11	10	6	9	11	6	8
	clutch	3	2	3	5	0	4	2	2	2
	hatchling	1	1	0	0	0	3	0	1	3
	fledgling	1	1	0	0	0	3	2	1	3
Low probability	Number	5	8	8	8	10	16	9	8	15
	clutch	0	2	2	1	1	3	1	1	3
	hatchling	0	0	0	0	0	0	0	0	1
	fledgling	0	0	0	0	0	1	0	0	1
Total potentail pairs		**25**	**26**	**27**	**25**	**26**	**35**	**29**	**22**	**26**
N. pairs sexual maturity in 1-2 years					10	10	3	6	5	5

Fortunately, the number of loses in 2024 has been lower than the last two years, and with the record of number produced nestlings in 2024 the EEP has had the opportunity to take a major step towards the goal set at its inception of having a captive population of around 200 specimens. Although the eight birds that died were of different ages, it has affected four breeding pairs (two more than 2023), two of which are young pairs that have just begun their reproductive life. On the other hand, five new breeding pairs have started to reproduce in 2024, mitigating these losses for the coming breeding season.

Unfortunately, this again year three young birds died (two on aspergillosis and one from drowning), maintaining the average age of death low (see graphic below). On the other hand, 50% of the death has been for different causes (two euthanasia because senile decay and a second because of a fibula fracture with severe osteoarthritis of the knee, a third died in an accident because he was blind, a fourth due to middle ear tumour and a fifth because of renal failure) reducing the number of loses due to diseases. If we have in mind that one of the young birds died on aspergillosis due to its weekly manipulation because of its lesions (fracture and bumblefoot) and a second juvenile born blind or nearly blind who drowned when he went to drink at the trough, the number of juvenile deaths would be reduced by only one, significantly increasing the average age of death (19.6 years of age).



On the other hand, the EEP was created as a basis for the reintroduction projects approved by the VCF/EEP, which entails a commitment on the part of the EEP to supply a minimum number of birds annually for all current projects. Nevertheless, the supply of birds for the projects must never jeopardize the future of the EEP and a balance has always been sought between both sides, giving priority to projects for some years and to the breeding programme for others. Following this dynamic the number of birds included in the EEP during the period 2004-2024 was as follows:

- During the EEP priority years, the average number of birds included in the breeding programme has been 11.83 individuals.
- During the reintroduction projects priority years, the average number of birds included in the breeding programme has been only 7.18 individuals, below the average number of individuals dying per year 5.64 birds, not being able to compensate the annual loss, and resulting in a negative deficit to the EEP.

The increase on the average number of birds included in the EEP, is due the wonderful results achieved in the last two seasons, being possible to satisfy the release and EEP needs at the same time.

In the same period the average number of deaths per year has been 5.71 birds/year, 2 birds/year below the total number of included birds per year in the breeding program (8.71). However, the real average number of birds included in the breeding programme is only 6.71, as several of those individuals have died before reaching sexual maturity.

Thanks to this dynamic incorporation of birds, the number of potential breeding pairs -including pairs which will arrive to their sexual maturity in 1-2 years-, has been able to be maintained between 25-38 pairs. Further, the total number of included birds into the EEP has been higher than the number of deaths (183 to 120 respectively; period 2004-2024). However, it should not be forgotten that the number of individuals incorporated into the program from native European populations (n= 18 birds) and the recovered released birds still alive (n= 7 birds), has had a significant influence on the total number of birds incorporated into the EEP (25 birds; 13.66% of the total number of incorporations). However, 8 of them were handicapped individuals, and six already died. And finally, several birds died before arriving sexual maturity, being the real number of incorporation 141 individuals, what represents in average 3 incorporations per year (total incorporation n=183, total death n=120; period 2004-2024).

The breeding success achieved in the last two years has made it possible for the captive stock to increase from 172 individuals (stock on the 31st December 2022) to 192 bearded vultures (stock on the 31st December 2024). Nevertheless, it took 10 years to increase from 159 to 173 birds. Currently, with a stock of more than 190 individuals, priorities may focus mainly on reintroduction projects, but without forgetting to maintain a captive population of around 200 individuals and continuously incorporating descendants of new founders to ensure the long-term genetic variability of the EEP.

NEW BREEDING CENTRES

In 2024 several institutions did a huge effort to increase their housing capacity and/or to guarantee the housing conditions of their collection as well to improve the management of the captive stock on their centres: Guadalentín breeding centre (Spain), Centre de Fauna Vallcalent (Spain) and Nuremberg Zoo. Furthermore two new EEP Partners, Le Pal (France) and Zie Zoo (Netherlands), finished with the building of an aviary for receiving Bearded Vultures.

Guadalentín breeding centre (Spain)

In 2024, three old damaged wooden aviaries were replaced by three metal cages. The cages have deteriorated over the last two winters, making it necessary to remove the birds from them and place them in the smaller cages (8 x 6 x 4m high) built in 2022 outside from the breeding unit, due to lack of space. At the same time, the whole video monitoring system from the centre have been replaced with a new system.

Guadalentín breeding centre with the three new metal aviaries replacing the old wooden damaged cages.

Centre de Fauna Vallcalent (Spain)

In autumn 2024 the remaining 20 cameras from last year were installed within the framework of the LIFE project Gyp'Act, ensuring that all cages have three cameras, one with an overview of the entire cage, a second focused on the nest from the front, and a third above the nest. This third camera was necessary to ensure that the chick could always be monitored properly, since in most cases when the adults fed the chick in front of the front-facing camera, they completely covered the chick, making it impossible to see its vitality and requiring additional nest checks.

Vallcalent breeding centre: within the framework of the LIFE project Gyp'Act, all aviaries have been provided with three high-quality video-cameras to ensure good monitoring of future breeding pairs and their offspring.

Nuremberg zoo (Germany)

Last year, July 2023, Nuremberg Zoo started with the construction of a double aviary outside from the public area in the quarantine station in Mittelbüg, with the goal to increase their breeding and adoption capacity, and also as support for the new release site in N.P. Berchtesgaden. The construction finished in October 2024.


Nuremberg zoo: two new Bearded Vultures aviaries have been built outside of the exhibition area to increase their breeding capacity.

Le Pal Zoo (France)

In November 2023 Le Pal Zoo started with the construction of a double aviary outside of the exhibition area, assigning one of them for a Bearded Vulture pair. To avoid any mistakes, during the whole construction period it was supervised by the EEP coordinator. The construction finished end of June 2024, and a few months later, in November, received a one-year-old female from Puy du Fou.



Le Pal zoo: end June 2024 the zoo finished with the construction of two new aviaries, assigning one of them for Bearded Vultures. In November 2024 the first bird arrived at the zoo.

Zie Zoo (Netherlands)

In 2022, Zie Zoo started planning the construction of a new exhibition aviary for a Bearded Vulture pair. In 2023 a completely new aviary was built and during spring 2024 last arrangements were done to be able to receive a young couple in July 2024.

Zie zoo: a new aviary was completely finished in spring 2024 to house a couple of young Bearded Vultures. At the bottom left one of the young birds when they arrived at the zoo in July. On the right the new young couple four months later.

OUTLOOK / NEWS

WORKSHOP ON ARTIFICIAL INCUBATION AND CHICK REARING – PARC ANIMALIER DES PYRÉNÉES

Between the 2nd and the 4th of October, a workshop on Bearded Vulture artificial incubation and chick rearing was held in French at Parc Animalier des Pyrénées. Breeding staff from all French zoos participating in the Bearded Vulture EEP took part in this workshop, as did Pairi Daiza Zoo from Belgium. The course was taught by VCF staff, biologist Carmen Calero and EEP coordinator assistant, and the EEP coordinator Àlex Llopis, as well as Asters staff member Théo Mazet.

It brought together representatives from several French-speaking EEP partners, including the Parc Animalier des Pyrénées, Asters, Puy du Fou, Parc des Oiseaux, Zoo Amnéville, Zoo Beauval, Le Pal, and Pairi Daiza from Belgium. Also, representatives from the Richard Faust Zentrum in Austria and LPO in France joined. Each participant gave a presentation about their centres and their work with bearded vultures, which was an excellent opportunity to get to know each other and exchange knowledge and opinions. Then the course took place, in which all the stages of breeding were discussed step by step, in a practical and participatory way. Finally, a visit was made to the modern facilities of the recently built bearded vulture breeding unit at Parc Animalier des Pyrénées.

Different moments of the workshop on bearded vulture artificial incubation and chick rearing at Parc Animalier des Pyrénées.

LIFE GYPRESCUE SEMINAR AND VCF INTERNATIONAL BEARDED VULTURE MEETING

From the 7th to the 10th of November, in Ajaccio, Corsica, two important events took place: the seminar of LIFE GypRescue and the International Bearded Vulture Meeting.

Throughout the seminar of LIFE GypRescue, hosted by Parc Naturel Régional de Corse, the results of this LIFE project, which began in October 2021, were widely presented. With more than 100 experts from various countries in attendance, the seminar provided valuable insights into the current state of Corsica's critically endangered Bearded Vulture population and underscored the need for continued collaborative efforts to secure its survival.

Among other milestones within this project, six young bearded vultures have been released on the island of Corsica, and there is already one pair stablished composed by two bearded vultures born within the EEP programme: BG890 Muntagnolu from RFZ released in 2016 and BG959 Luna from Ostrava Zoo released in 2017.

Presentation of the results of GypRescue LIFE Project during the Seminar in Ajaccio.

Bearded Vulture EEP: results for 2024

On the 8th of November, right after the of the GypRescue seminar finished, the 2024 International Bearded Vulture Meeting began. Once again, this meeting brought together a dedicated community of experts, researchers and conservationists to promote the protection of the bearded vulture through a packed programme of presentations and activities, which concluded with a field trip to the bearded vulture territory of Evisa in Corsica, where two specimens were sighted in flight: Luna and Muntagnolu.

Attendees at the International Bearded Vulture Meeting in Corsica.

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

We would like to thank our sponsors:

Mr. Novacek Rene

ANNEXES

Table 1: EEP stock and its distribution as on 31st December 2024

N. ♂	N. ♀	LOCATION	COUNTRY	Age ♂	Age ♀	PARENTAGE {m/f} / {m/f}	GENERATION ♂	GENERATION ♀	REMARKS
1024	982	Aachen zoo	Germany	6	7	{500/513} / {410/290}	F1 / F2/F3	F2	
753	653	Acad. Puy du Fou	France	11	14	{371/103} / {124/041}	F3/F2 / F2/F3	F2	
912	889	Amnéville Zoo	France	9	9	{461/483} / {286/153}	F2/F3 / F3-F4/ F3	F1	
454	502	ASTERS	France	20	19	{108/175} / {179/281}	F2/F3 / F2	F2	
700	627			13	15	{286/153} / {371/103}	F1	F3-F2/F2-F3	
860	622			10	15	{500/513} / {371/103}	F1 / F2/F3	F3-F2/F2-F3	
1039	1045			6	6	{681/560} / founder	F1 / F4-F3/F3-F4	F0	
763	635	Beauval Zoo	France	12	15	{129/481} / {159/270}	F3/F1	F1	
611		Beozoo	Serbia	15	15	{199/107} /	F1/F2		
	1142				3	/ {611/634}		F2/F3 / F2/F3	
1223				1		{611/634}	F2/F3 / F2/F3		Sex unknown
298	320	Berlin Zoo	Germany	27	26	{122/108} / {018/272}	F2	F2	
124	329	CC Guadalentín	Spain	35	26	{131/132} / {043/040}	F1	F1	
286				35	16	founder /	F0		
313	330			26	26	{009/006} / {108/119}	F1/F2	F2-F3/F2	
337	317			26	26	{201/044} / {017/070}	F1/F2	F2	
362	389			25	23	{080/081} / {199/107}	F2	F1/F2	
391	360			23	25	{124/041} / {018/272}	F2	F2	
410	908			22	9	{286/153} / founder	F1	F0	
	290				27	/ {134/135}		F1	
590	658			16	14	{223/329} / {199/107}	F2/F3	F1/F2	
947				8		{223/725} /	F2/F1		
1006	987			7	7	{681/560} / {500/513}	F1 / F4-F3/F3-F4	F1 / F2/F3	
1050	911			6	9	founder / {431/436}	F0	F1 / F3/F2	
	976				7	/ {362/389}		F3 / F2/F3	Cataracts
	1120				4	/ {763/635}		F4/F2 / F2	
1181				2		{371/456} /	F3/F2 / F2		
	1193				2	/ {850/747}		F3/F2 / F2	
1203				1		{362/389} /	F3 / F2 /F3		
500	513	CF Torreferrussa	Spain	19	18	founder / {009/006}	F0	F1/F2	
297	115	CF Vallcalent	Spain	27	36	{086/104} / {019/021}	F2	F1	
371	456			24	20	{105/178} / {286/153}	F2/F1	F1	
551	580			17	23	founder / {201/044}	F0	F1/F2	
652	680			16	16	founder / founder	F0	F0	
662	668			14	14	{371/103} / {172/290}	F3/F2 / F2/F3	F2/F3 / F2	
368				25		{159/270} /	F1		Handraised
1091	588			6	16	founder / {371/103}	F0	F3-F2/F2-F3	
1152	1020			3	6	{313/330} / {180/274}	F2-F3 / F4-F3/F3	F2/F1	

Bearded Vulture EEP: results for 2024

N. ♂	N. ♀	LOCATION	COUNTRY	Age ♂	Age ♀	PARENTAGE {m/f} / {m/f}	GENERATION ♂	GENERATION ♀	REMARKS
1179	1205	CF Vallcalent	Spain	2	2	{287/115} / {371/456}	F3/F2	F3/F2 / F2	
1153	1133			3	3	{763/635} / {500/503}	F4/F2 / F2	F1 / F2/F3	
1035	620			5	15	{654/656} / {172/290}	F3/F4 / F3 / F3/F2	F2/F3 / F2	
1180	1194			2	2	{431/436} / {700/627}	F3/F2 / F2	F2 / F4-F3/F3-F4	
973*	1010*			8	7	{GT099/493} / {GT099/493}	?/ F2/F3	?/ F2/F3	Both feather problems
1224	1191			1	2	{681/560} / {850/747}	F1 / F4-F3/F3-F4	F3/F2 / F3	
234	397			30	23	{086/104} / {201/044}	F2	F1/F2	
1218	1048			1	6	{080/518} / {431/436}	F2 / F3	F1 / F3/F2	
	1173				2	/ {207/233}		F3	
340	338	Chomutov Zoo	Czech Rep.	25	25	{018/272} / {134/135}	F2	F1	
1244	1200	Córdoba Zoo	Spain	1	1	{681/560} / {297/115}	F1 / F4-F3/F3-F4	F3/F2	
826	978	FPWC - CWR	Armenia	25?	7	founder / {826/828}	F0 / F1		
788	281	Helsinky Zoo	Finland	11	28	{297/115} / {131/132}	F3/F2	F1	
804	801	Alp. Innsbruck	Austria	11	11	{340/338} / {371/103}	F3/F2	F3-F2/F2-F3	
	1195	Le Pal	France		2	/ {753/653}		F4-F3/F3-F4 / F3	
847	829	La Garenne Zoo	Zwitzerland	10	10	{313/330} / {108/175}	F2/F3 / F3-F4/F3	F2/F3 / F2	
	274	Liberec Zoo	Czech Rep.		39	/ founder		F0	
654	656			14	14	{108/175} / {180/274}	F2/F3 / F2	F2/F1	
748	832	Moscow Zoo	Rusia	12	10	{108/175} / {180/274}	F2/F3 / F2	F2/F1	
	726	Nikolaev Zoo	Ucraina		17	/ founder		F0	
744	657	Novosibirsk Zoo	Rusia	29	14	founder / {223/329}	F0	F2/F3	
1008	1158			26	?	founder / founder	F0	F0	
1243					1	{744/657}	F1 / F3/F4		
	1253				3	?			
18	336	Nuremberg Zoo	Germany	46	26	{019/021} / {201/044}	1	F1/F2	
1228	1189			1	2	{201/576} / {857/835}	F1 / F3/F4 / F3	F4/F3 / F3 / F3 / F3/F4	
993	896	Oasi Sant' Alessio	Italy	7	9	{199/107} / {399/278}	F1/F2	F2 / F2/F3	
325	322	Ostrava Zoo	Czech Rep.	26	26	{017/070} / {152/153}	F2	F1	
207	233			31	30	{017/070} / {122/118}	F2	F2	
850		P. Animalier Pyrénées	France	10		{223/725} /	F2/F1		
1154	1096			3	4	{431/436} / {399/278}	F1 / F3/F2	F2 / F2/F3	
	1157				3	/ {857/835}		F4/F3 / F3 / F3 / F3/F4	
	1226				1	/ {087/547}		F2 / F3/F2	
	469				20	/ {018/272}		F2	
591	1007			16	7	{080/081} / {108/175}	F2	F2/F3 / F2	
1230				1		{652/680} /	F1		
894	598	Parc des Oiseaux	France	9	15	{286/153} / {145/276}	F1	F2 / F2/F3	
664	659	Parc Pairi Daiza	Belgium	14	14	{391/360 / {017/070	F3	F2	

**Wild born descendant from released birds*

Bearded Vulture EEP: results for 2024

N. ♂	N. ♀	LOCATION	COUNTRY	Age ♂	Age ♀	PARENTAGE {m/f} / {m/f}	GENERATION ♂	GENERATION ♀	REMARKS
914	903	Plock Zoo	Poland	9	9	{461/483} / {174/118}	F2/F3 / F3/F4 / F3	F2	
328	561	Poznan Zoo	Poland	26	17	{080/081} / {313/330}	F1	F2/F3 / F3-F4/F3	
511	519	Prague Zoo	Czech Rep.	18	18	{002/003} / {105/178}	F1	F2/F1	
1065	1072			5	5	{410/290} / {431/436}	F2	F1 / F3/F2	
461	483	RC Green Balkans	Bulgaria	20	19	{199/107} / {108/175}	F1/F2	F2/F3 / F2	
1034	999			6	7	{399/278} / {340/338}	F2 / F2/F3	F3/F2	
1250	1187			1	2	{594/892} / {857/835}	F3/F4 / F3 // F3/F2	F4/F3 / F3 / F3/F4	
108	1044	Richard Faust Center	Austria	36	6	{065/040} / {431/436}	F1/F2	F1 / F3/F2	
212	107			31	37	{152/153} / {150/151}	F1	F1	
594	892			16	9	{172/290} / {223/725}	F2/F3 / F2	F2/F1	
399	278			23	28	{159/270} / {065/074}	F1	F1/F2	
468	381			20	24	{223/132} / 159/270}	F2/F1	F1	
87	547			39	17	{014/010} / {105/178}	F1	F2/F1	
681	560			17	17	founder / {371/103}	F0	F3-F2/F2-F3	
857	835			10	10	{468/453} / {399/278}	F3/F2 / F2	F2 / F2/F3	
	619				15	/ {297/115}		F3/F2	
80	518			40	18	{019/021} / {087/054}	F1	F1	
	6				47	/ {019/020}		F1	
327				26		{105/178} /	F2/F1		
	321				27	/ {034/130}		F1/F2	
	969				8	/ {145/276}		F2 / F2/F3	
	1108				4	/ {468/381}		F3/F2 / F2	
201	576			37	16	founder / {108/175}	F0	F2/F3 / F2	
	44				45	/ {002/003}		F1	
1155	1149			3	3	{753/653} / {763/635}	F4-F3/F3-F4 / F3	F4/F2 / F2	
1168				2		{017/070} /	F2		
	1246				1	/ {431/436}		F3/F2 / F2	
1252	1241	Schönbrunn Zoo	Austria	1	1	{664/659} / {468/381}	F4/F3	F3/F2 / F2	
431	436	Tallinn Zoo	Estonia	25	21	founder / {180/274}	F0	F2/F1	
437	503	Tier. Friedrichsfelde	Germany	21	19	{180/274} / {294/292}	F2/F1	F3 / F2/F3	
	1204				1	/ {654/656}		F3/F4 / F3 / F3/F2	
174	118	Tier.Goldau	Zwitzerland	33	36	{134/135} / {154/155}	F1	F1	
1220	1106			2	4	{174/118} / {788/281}	F2	F4/F3 / F2	
1066	1028			5	6	{298/320} / {371/103}	F3	F3-F2/F2-F3	
	209	Walsrode	Germany		31	/ {150/151}		F1	
1232	1236	Zie Zoo	Netherlands	1	1	{857/835} / {087/547}	F4/F3 / F3 / F3/F4	F2 / F3/F2	
844	673	Zoobotanic Jerez		10	14	{337/317} / {313/330}	F2/F3 / F3	F2/F3 / F3-F4/F3	

Table 2: Age distribution of bearded vultures within the EEP as on 31st December 2024

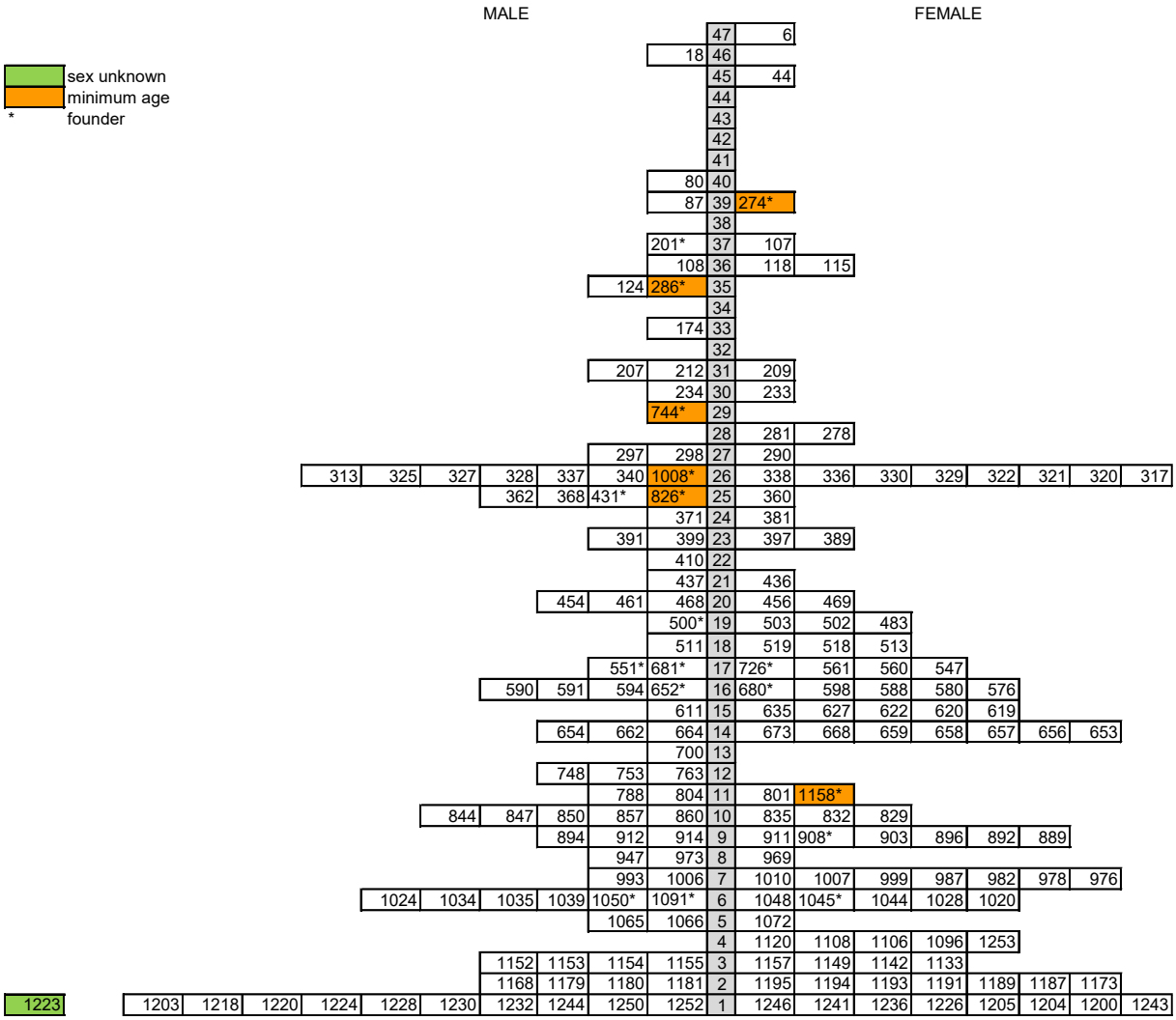


*Table 3: Breeding pairs and their results in **2024***

AUSTRIA	PAIR	LAY DATE	HATCH DATE
Richard Faust Zentrum	BG 108065040 x BG 175152153	1st: 4th Dec 2nd: 10th Dec	25th Jan Aborted
	BG 080019021 x BG 518087054	1st: 2nd Jan 2nd: 9th Jan	26th Feb 3rd Mar
	BG 087014010 x BG 547105178	1st: 9th Jan 2nd: 16th Jan	3rd Mar 9th Mar
	BG 201 x BG 576108175	1st: 4th Jan 2nd: 10th ? Jan	27th Feb (died 4th Mar) 4th Mar
	BG 468223132 x BG 381159270	1st: 14th Jan 2nd: 25thJan	6th Mar 20th Mar
	BG 399159270 x BG 278065074	1st: 24th Dec 2nd: 3rd Jan	Died during hatching Died during hatching
	BG 681 x BG 560371103	1st: 6th Dec 2nd: 14th Jan	28th Feb 7th Mar
	BG 594172290 x BG 892223725	1st: 30th Jan 2nd: 9th Feb	24th Mar 2nd Apr
	BG 857468453 x BG 835399378	1st: 13th Jan 2nd: 20th Jan	6th Mar 12th Mar
	BG 327105178 x BG 006019020	1st: 3rd Feb	Infertile
Alpenzoo Innsbruck	BG 804340338 x BG 801371103	1st: 30th Dec	Infertile
FRANCE			
Asters Breeding Centre	BG 700286153 x BG 627371103	1st: 21st Jan 2nd: 30th Jan	Aborted 22nd Mar
	BG 454108175 x BG 518087054	1st: 31st Dec	Putrefied
	BG 860500513 x BG 622371103	1st: 29th Dec	Putrefied
A. de Fauconnerie du Puy du Fou	BG 753371103 x BG 653124041	1st: 27th Jan 2nd: 3rd Feb	Aborted Infertile
Beauval Zoo	BG 763129482 x BG 635159270	1st: 2nd Jan	21st Feb
Parc Animalier des Pyrénées	BG 850233725 x BG 747286153	1st: 3rd Jan	Aborted
GERMANY			
Tierpark Friedrichsfelde Berlin	BG 437180274 x BG 503294292	1st: 12th Jan 2nd: 18th Jan	9th Mar Infertile
Nuremberg Zoo	BG 018019021 x BG 336201044	1st: 7th Jan	Aborted
SPAIN			
Centro de Cría Guadalentín	BG 313009006 x BG 330108119	1st: 4th Jan	25th Feb

		2nd: 12th Jan	4th Mar
	BG 391124041 x BG 360018272	1st: 26rd Dec 2nd: 2nd Jan	Died during hatching 26st Feb
	BG 337201044 x BG 317017070	1st: 24th Dec 2nd: 30th Dec	14th Feb 20th Feb (died 27th Feb)
	BG 362080081 x BG 389199107	1st: 9th Dec 2nd: 17th Dec	2nd Feb 9th Feb
	BG 590223329 x BG 658199107	1st: 03rd Jan 2nd: 17th Jan	25th Feb 11th Mar
	BG 124131132 x BG 329043040	1st: 17th Dec 2nd: 23th Dec	8th Feb 14th Feb
Centre de Fauna Vallcalent	BG 297086104 x BG 115019021	1st: 13th Dec 2nd: 25th Dec	4th Feb Putrefied
	BG 371105178 x BG 456286153	1st: 20th Dec	10th Feb
	BG 652 x BG 680	1st: 12th Jan	4th Mar
	BG 1091 x BG 588371103	1st: 14th Jan	08th Aborted
Centre de Fauna Torreferrussa	BG 500 x BG 513009006	1st: 25th Dec 2nd: 30th Dec	17th Feb 21st Feb
Jerez Zoo	BG 844337317 x BG 673313330	1st: 19th-20th Feb	Infertile
SWITZERLAND			
Breeding Centre Goldau	BG 174134135 x 118154155	1st: 4th Jan	25th Feb
TS-REPUBLIC			
Liberec Zoo	BG 180161162 x BG 274	1st: 15th Dec 2nd: 25th Dec	Infertile Infertile
	BG 654108175 x BG 656180274	1st: 19th Dec 2nd: 30th Dec	9th Feb 22nd Feb
Chomutov Zoo	BG 340018272 x BG 338134135	1st: 30th Jan	26th Mar (died 30th Mar)
Ostrava Zoo	BG 207017070 x BG 233122118	1st: 12th Jan 2nd: 23rd? Jan	Aborted 19th Mar
	BG 325017070 x BG 322152153	1st: 14th Jan 2nd: 23rd Jan	6th Feb Aborted
Prague Zoo	BG 511108175 x BG 519105178	1st: 6th Jan	Infertile
ESTONIA			
Tallinn Zoo	BG 431 x BG 436180274	1st: 26th Jan 2nd: 2nd Feb	18th Mar 25th Mar

BELGIUM			
Pairi Daiza	BG 664391369 x BG 659017070	1st: 17th Feb 2nd: 23rd Feb	12th Apr (died 14th Apr) 19th Apr
ITALY			
Centre Monticello (M. Albertini)	BG 234086104 x BG 397201044	1st: 18th Jan	Died during hatching
FINLAND			
Helsinki Zoo	BG 788297115 x BG 281131132	1st: 8th-9th Jan	2nd Mar
BULGARIA			
Rescue Centre Green Balkans	BG 461199107 x BG 483108175	1st: 29th Feb	Aborted
SERBIA			
Belgrade Zoo	BG 611199107 x BG 634034130	1st: 4th Jan 2nd: 12th Jan	28th Feb 4th Mar (died 30th Mar)
RUSSIA			
Novosibirsk Zoo	BG 744 x BG 657223329	1st: 14th Dec 2nd: 22nd Dec 3rd: 22nd Jan	Aborted (broken) Aborted (broken) 16th Mar

Table 4. Destination Offspring in 2024

STUDBOOK NO.	PARENTAGE	SEX	BREEDING STATION/ZOO	DESTINATION
BG 1198	BG 108 x BG 175	m	Richard-Faust-Zentrum	RELEASE (Baronnies, Léoux Valley, FRANCE)
BG 1199	BG 362 x BG 389	f	Centro de Cría Guadalentín	**BREEDING** (blind, died on 1st Oct)
BG 1200	BG 297 x BG 115	f	Centre de Fauna Vallcalent	**BREEDING** (Destination: Córdoba Zoo)
BG 1201	BG 325 x BG 322	f	Ostrava Zoo	RELEASE (Baronnies, Léoux Valley, FRANCE)
BG 1202	BG 124 x BG 329	f	Centro de Cría Guadalentín	RELEASE (Lozère, Grands Causses, FRANCE)
BG 1203	BG 826 x BG 828	m	Centro de Cría Guadalentín	**BREEDING** (Destination: T. Friedrichsfelde)
BG 1204	BG 654 x BG 656	f	Liberec zoo	**BREEDING** (Destination: T. Friedrichsfelde)
BG 1205	BG 371 x BG 456	f	Centre de Fauna Vallcalent	**BREEDING** (Destination: CF Vallcalent)
BG 1206	BG 124 x BG 329	m	Centro de Cría Guadalentín	Exchanged with FCQ and released in Picos de Europa
BG 1207	BG 337 x BG 317	f	Centro de Cría Guadalentín	RELEASE (Lozère, Grands Causses, FRANCE)
BG 1208 1)	BG 399 x BG 278	?	Richard-Faust-Zentrum	DIED
BG 1209	BG 500 x BG 513	f	Rescue Centre Torreferrusa	RELEASE (Guadalentín, Andalusia, SPAIN)
BG 1210 2)	BG 391 x BG 360	?	Centro de Cría Guadalentín	DIED
BG 1211 3)	BG 337 x BG 317	?	Centro de Cría Guadalentín	DIED
BG 1212	BG 500 x BG 513	f	Rescue Centre Torreferrusa	RELEASE (Melchsee-Frutt, SWITZERLAND)
BG 1213	BG 763 x BG 635	m	Beauval Zoo	RELEASE (Melchsee-Frutt, SWITZERLAND)
BG 1214	BG 654 x BG 656	f	Liberec Zoo	RELEASE (P.N. Tinença, Maestrazgo, SPAIN)
BG 1215	BG 590 x BG 658	f	Centro de Cría Guadalentín	RELEASE (P.N. Tinença, Maestrazgo, SPAIN)
BG 1216	BG313 x BG 330	m	Centro de Cría Guadalentín	Exchanged with FCQ and released in Picos de Europa
BG 1217 4)	BG 399 x BG 278	?	Richard-Faust-Zentrum	DIED
BG 1218	BG 080 x BG 518	m	Richard-Faust-Zentrum	**BREEDING** (Destination: CF Vallcalent)
BG 1219	UR15 Añisclo II	?	Aragon Pyrenees	RELEASE (Guadalentín, Andalusia, SPAIN)
BG 1220	BG 174 x BG118	m	Tierpark Goldau	**BREEDING** (Destination: Tierpark Goldau)
BG 1221	BG 391 x BG 360	f	Centro de Cría Guadalentín	RELEASE (Vercors, FRANCE)
BG 1222 5)	BG 201 x BG 576	f	Richard-Faust-Zentrum	DIED
BG 1223	BG 611 x BG 634	?	Belgrade Zoo	**BREEDING** (Destination: Belgrade Zoo)
BG 1224	BG 681 x BG 560	m	Richard-Faust-Zentrum	**BREEDING** (Destination: CF Vallcalent)
BG 1225	BG 804 x BG 801	f	Alpenzoo	RELEASE (P.N. Tinença, Maestrazgo, SPAIN)
BG 1226	BG 087 x BG 547	f	Richard-Faust-Zentrum	**BREEDING** (Parc Animalier des Pyrénées, FRANCE)
BG 1227	BG 080 x BG 518	m	Richard-Faust-Zentrum	RELEASE (Berchtesgaden, GERMANY)
BG 1228	BG 201 x BG 576	m	Richard-Faust-Zentrum	**BREEDING** (Destination: Nuremberg Zoo)
BG 1229	BG 313 x BG 330	f	Centro de Cría Guadalentín	RELEASE (Vercors, FRANCE)
BG1230	BG 652 x BG 680	m	Centre de Fauna Vallcalent	**BREEDING** (Parc Animalier des Pyrénées, FRANCE)
BG 1231 6)	BG 611 x BG 634	?	Belgrade Zoo	DIED
BG 1232	BG 857 x BG 835	m	Richard-Faust-Zentrum	**BREEDING** (Destination : Zie Zoo)
BG 1233	BG 468 x BG 381	f	Richard-Faust-Zentrum	RELEASE (Monte Renoso Massif, Corsica, FRANCE)
BG 1234	BG 681 x BG 560	f	Richard-Faust-Zentrum	RELEASE (Melchsee-Frutt, SWITZERLAND)
BG 1235 7)	BG 234 x BG 397	?	Montowl, Monticello	DIED
BG 1236	BG 087 x BG 547	f	Richard-Faust-Zentrum	**BREEDING** (Destination : Zie Zoo)
BG 1237	BG 437 x BG 503	f	Tierpark Berlin	RELEASE (Sierra Nevada, Andalusia, SPAIN)

BG 1238	BG 590 x BG 658	f	Centro de Cría Guadalentín	RELEASE (Lozère, Grands Causses, FRANCE)
BG 1239	BG 857 x BG 835	f	Richard-Faust-Zentrum	RELEASE (Monte Renoso Massif, Corsica, FRANCE)
BG 1240	BG 788 x BG 281	m	Helsinki Zoo	RELEASE (Berchtesgaden, GERMANY)
BG 1241	BG 468 x BG 381	f	Richard-Faust-Zentrum	**BREEDING** (Destination : Schönbrunn Zoo)
BG 1242	BG 207 x BG 233	f	Ostrava Zoo	RELEASE (Lozère, Grands Causses, FRANCE)
BG 1243	BG 744 x BG 657	?	Novosibirsk Zoo	**BREEDING** (Destination : Novosibirsk Zoo)
BG 1244	BG 700 x BG 627	m	Asters	**BREEDING** (Destination : Córdoba Zoo)
BG 1245	BG 594 x BG 892	f	Richard-Faust-Zentrum	RELEASE (Guadalentín, Andalusia, SPAIN)
BG 1246	BG 431 x BG 436	f	Tallin Zoo	**BREEDING** (Destination : Richard-Faust-Zentrum)
BG 1247	BG 431 x BG 436	f	Tallin Zoo	RELEASE (Guadalentín, Andalusia, SPAIN)
BG 1248	UR78 FANLO	m	Aragon Pyrenees	RELEASE (Sierra Nevada, Andalusia, SPAIN)
BG 1249[7)]	BG 340 x BG 338	?	Chomutov Zoo	DIED
BG 1250	BG 594 x BG 892	m	Richard-Faust-Zentrum	**BREEDING** (Destination: Rescue Centre Green Balkans)
BG 1251[8)]	BG 664 x BG 659	?	Pairi Daiza	DIED
BG 1252	BG 664 x BG 659	m	Pairi Daiza	**BREEDING** (Destination: Schönbrunn Zoo)

1), 2), 4), 7) Died during hatching.
3) Was killed by its father shortly after the adoption.
5) Died due to yolk sac infection after 7 days.
6) Died during hand rearing, unknown reason.
8), 9) Died during natural rearing.