



Bearded vulture Alpine Reintroduction Project – Release rationale and strategy 2014-2016

The main goal of the ongoing bearded vulture reintroduction projects in the Alps (including Grands Causses – French Massif Central) and in Andalucía is to establish self-sustainable populations that can survive without any artificial feeding. Correspondingly, the reintroduced populations should have adequate survival and reproduction rates, and have a sufficient genetic diversity. In addition it is aimed that in the long term these bearded vulture populations should be naturally connected (=have natural gene flow) between themselves, with the Pyrenean population, and eventually with others, in an interconnected European metapopulation that occupies most of its former European range, to further strengthen the long-term viability of bearded vulture populations across the continent.

In the Alps, the population viability studies done suggest that a slow but steady population growth can now be expected without any further releases (Schaub et al., 2009). However the reintroduced population there has still a very narrow genetic base, since most of the founders are not yet sufficiently represented in the wild population (Loercher et al., 2013). In the short-term, the release of young birds to enhance the genetic diversity should therefore be continued. Also, we still need further releases to promote the connection of the Alpine and the Pyrenean populations (Hegglin et al., 2010).

Hence, in the short-term future releases in the Alps are associated with two objectives:

- Enhance the genetic diversity with releases of rare genetic lineages in the core, most stable and productive region in the Alpine chain - Central Alps
- Build up a corridor population to connect the Alpine and the Pyrenean population, through continuing releases in the Grands Causses-Massif Central

On the other hand, the Andalusian reintroduction project is now still in an early phase – releases only started in 2006. The Andalusian bearded vulture population, which so far has no breeding pairs, is very young and small, also because mortality rates were higher than expected during the first years the project. Now it seems that mortality causes have been largely minimised, thank you to the enormous efforts the Junta de Andalusia and the Fundation Gypaetus put on the ground against the threats of poisoning and saturnism. Therefore, in the medium-term at least 3-5 birds should be released in this region each year, to build up numbers, and an adequate gene pool, while we wait for the first natural breeding of the released young. Needless to say, the close monitoring of the population and the continuation of the anti-poison program being implemented by the Junta is crucial for the long-term success of this reintroduction programme.

In any given year, the number of young bearded vultures available for release in the Alps and Andalusia depends on the productivity observed in the EEP network. Furthermore it is important to

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keep some young in the EEP to balance sex-ratios, keep representative founder lines in the captive network and ensure a dynamic captive stock.

The plans below, for the period 2014-2016, were developed for three different scenarios:

Bad productivity: 9 birds available for release per year, after EEP needs are met

Average productivity: 12 birds available for release per year, after EEP needs are met

Good productivity: 15 birds available for release per year, after EEP needs are met

These numbers are estimations only. As we are working with animals it is possible that unforeseen and uncontrollable factors cause changes in the expected productivity, which might lead to short term changes in the availability of birds for release, and therefore on the release plan.

Proposed number of birds to be released per site and year:

Site	2014	2015	2016
Central Switzerland	Release up to 3 birds ¹	Release up to 3 birds ¹	Release up to 3 birds ¹
Austria, Hohe Tauern	Release 2 birds	No release	Release 2 birds ²
Mercantour / Alpi Marittime	No release	Release 2 birds	No release
LPO Grands Causses/Massif Central	Release 2 birds	Release 2 birds ²	Release 2 birds
Vercors	Release 2 birds ²	Release 2 birds	Release 2 birds
Andalusia	Release 3 to 5 birds	Release 3 to 5 birds	Release 3 to 5 birds

¹ from rare genetic lineages ² if the EEP productivity is bad (a total of only 9 birds available), no birds are available for this release site

If successful, the LIFE project GYPCONNECT will start in 2015, focussing releases in Vercors and Massif Central. These then will have priority over Hohe Tauern or Mercantour/Alpi Marittime in 2016 and beyond.

References

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