INTERNATIONAL
BEARDED VULTURE
MONITORING

# Annual report 2024

---

## International Bearded Vulture Monitoring - IBM

*© Hansruedi Weyrich*

# Imprint

**Author**
Mirco Lauper

**Version**
12/18/2025

**Recommended form of citation**
Lauper, M (2025): Annual Report 2024 - International Bearded Vulture Monitoring (IBM); ed. Vulture Conservation Foundation. pp. 56

**Contact**
ibm@4vultures.org

**IBM-MEMBERS**

ALPINIUM
ASTERS
ENVERGURES ALPINES
GENERALITAT VALENCIA
JUNTA DE ANDALUSIA
LBV – LANDESBUND FÜR VOGELSCHUTZ BAYERN
LPO GRANDS CAUSSES
NATIONALPARK HOHE TAUERN
PARC NATIONAL DES CÉVENNES
PARC NATIONAL DE LA VANOISE
PARC NATIONAL DU MERCANTOUR
PARC NATUREL RÉGIONAL DE CORSE
PARC NATUREL RÉGIONAL DU VERCORS
PARCO NATURALE ALPI COZIE
PARCO NATURALE ALPI MARITTIME - WAON
PARCO NAZIONALE DELLO STELVIO / NATIONALPARK STILFSERJOCH
PARCO NAZIONALE GRAN PARADISO
STIFTUNG PRO BARTGEIER / FONDATION PRO GYPAÈTE
THE VULTURE CONSERVATION FOUNDATION
VAUTOURS EN BARONNIES

**ASSOCIATED ORGANISATIONS**

GPFSA - GROUPE POUR LA PRÉSERVATION DE LA FAUNE SUD-ALPINE
MUSEUM HINTER PASSEIER
NATURPARKE TIROL
PARC NATIONAL DES ÉCRINS
REGIONE AUTONOMA VALLE D'AOSTA
SONDRIO PROVINCE

# 1 The IBM & its administration

The international Bearded Vulture monitoring (IBM) is an expanding international network to coordinate the monitoring activities for European Bearded Vulture populations, to unify and manage data collections in a shared database (IBM-database) and to discuss conservation strategies and priorities for this species on an international level.

In 2024 the IBM comprised 20 IBM-partners and 6 associated organisations. The lead partner was the Vulture Conservation Foundation (VCF) and the IBM-database was managed by Mirco Lauper, while additional administrative and coordinating work was carried out by Franziska Lörcher. These costs, as well as the costs for rings, database hosting, database upgrade etc. were covered by a budget of 41’359 Euros. The budget was financed by the fee of each IBM-partner and additional funds from a Swiss foundation. LIFE GypAct and Bearded Vulture LIFE, which for the fifth consecutive year allowed to reduce the partner fee substantially, from 3’000 Euros to currently 1’600 Euros for partners which are releasing birds and 800 Euros for the other partners.

In order to inform the IBM-partners about important news, the latest observations and the development of the Bearded Vulture reproduction in the wild, 9 short reports *IBM Update & Reminder* were sent out in 2024. Collective decisions and discussion were held during the steering committee online meeting in April and the live-meeting in Corsica during the international Bearded Vulture meeting in November 2024.

# 2 Summary

In 2024, a total of 24 Bearded Vultures were released across eight sites in France, Germany, Spain, and Switzerland. Within the Alpine region, two birds each were released in Baronnies and Vercors (France), Berchtesgaden (Germany), and three in Melchsee-Frutt (Switzerland). Additionally, two birds were released on Corsica, four in the Massif Central (France), three in Maestrazgo and six in Andalusia (Spain).

A new breeding record was set in the Alpine range this year, with 61 chicks successfully fledging. Of the 98 occupied territories, breeding attempts were reported from 85 nests, though productivity varied by region: 73% in the south-western Alps, 68% in the north-western Alps, 66% in the central Alps, and 50% in the eastern Alps, averaging 66% overall. Ten territories saw their first breeding attempts and for six it was the first successful reproduction - including sites in Switzerland (Sefinental, Stalden), France (Encombres and Valgaudemar), and Italy (Rabbi and Gran San Bernardo).

On Corsica, although four pairs attempted to breed and one chick hatched in Evisa, none of the breeding efforts succeeded in the end. In the Massif Central, nesting behaviour was observed for the seventh consecutive year from the pair Layrou and Adonis (two males), and a new breeding pair with a subadult bird was established. In Andalusia, out of 12 monitored territories, a clutch was reported in nine territories. From five chicks that hatched, four juveniles fledged successfully (Vadillo, Castrileña, Nica, Simón).

The coloured aluminium ring system, introduced in 2021, was used for the fourth year. All released birds were marked with bleached feather patterns and fitted with GPS tags to monitor their movements and life history. Seven wild hatchlings in France (Alpi, Geny, Timo, Genep, Farra, Fortiche, Franchet) and four in Andalusia (Simón, Nica, Castrileña, Vadillo) also received rings and GPS tags. Overall, 97 Bearded Vultures (25 wild-hatched and 72 released) were tracked via GPS, with data recorded in the WildlifeMonitor and the IBM.
The IBM network documented over 2’600 Bearded Vulture observations from seven European countries (Austria, Switzerland, Germany, France, Italy, Liechtenstein, Norway). These observations provided life history data for 76 identified individuals, including 17 wild-hatched birds. Combined with reproduction monitoring, GPS tracking, and the International Bearded Vulture Observation Days (IOD), 226 individuals were identified in 2024: 189 in the Alps, 18 in the Massif Central and French Pyrenees, 12 in Maestrazgo and Andalusia, and 7 in Corsica. Additionally, 4’666 observations from ornitho.ch and 213 from ornitho.de were transferred to the IBM database, enabling regional managers in Switzerland and Germany to review and follow up on the information.

Unfortunately, 15 cases of dropouts were reported (8 mortalities, 6 recoveries, 1 unsuccessful release), distributed across France, Spain, Switzerland, Italy, and Poland. Similar as in the previous year anthropogenic causes accounted for at least one-third of the mortalities. GPS monitoring played a crucial role in preventing or investigating these incidents, with six dropouts successfully averted. Finally, investigations into dropout cases continue to inform future conservation strategies and are therefore essential for the success of the reintroduction project.

# 3 Key facts

**24 Bearded Vultures released at 8 sites:**

- 2 in Germany in Berchtesgaden
- 3 in Switzerland in Melchsee-Frutt
- 8 in France: 2 in Vercors, 2 in Baronnies and 4 in Grands Causses
- 9 in Spain: 3 birds in Maestrazgo and 6 in Andalusia at two sites

**Reproduction**

- Alpine range: 98 occupied territories, 85 clutches, 61 fledglings
  - Productivity varied between 50% (eastern Alps) and 73% (south-western Alps)
- Massif Central: a second territory has been occupied
- Corsica: 4 breeding failures despite a hatch in Evisa lead to no reproduction.
- Andalusia: breeding in 9 out of 12 monitored territories, 4 chicks fledged successfully

**Monitoring and the IBM-database**

- 2'693 observations from 7 countries by 20 IBM-partners and 6 associated organisations
  - 29% of the observed birds could be identified on individual level
- >4'666 (CHE) and 213 (GER) observations were imported from the ornitho-platforms
- 226 individuals with known origin in the Alps (N=189), the Massif Central & French Pyrenees (N=18), Maestrazgo and Andalusia (N=12) and Corsica (N=7) were identified on individual level
- IOD: 1'410 observers occupied 858 sites and reported 1'162 Bearded Vulture observations during the International Bearded Vulture Observation Days
- Population size estimates based on IOD 2024 data: 414 – 547 individuals were estimated in the Alpine range, 15-19 in the Massif Central, 5-6 in the Pre-Pyrenees (FRA), 34-47 for Spain (without Pyrenees) and 7 in Maestrazgo (ESP) respectively.

**Markings & telemetry**

- All 24 released birds have been marked with a solar powered GPS-tag. In 2024 GPS data of 72 released and 25 wild-hatched birds was stored in the WildlifeMonitor.
- 7 wild-hatched juveniles were ringed and equipped with GPS-tags in France (Alpi, Geny, Timo, Genep, Farra, Fortiche and Franchet and 4 in Andalusia (Simón, Nica, Castrileña and Vadillo)

**Dropouts**

- 8 mortalities: BelArosa, Franchet, Lopezosa, Mison, Tinizong2023, Trupchun2024, Seo and an unknown bird
- 5 recoveries: Johannes, Guillaumes, Oeil Rouge, Piuma, Rei del Causse and Veleta
- 1 unsuccessful release: Torreferrussa (mortality)

# 4 IBM-standards

The IBM-standards serve as guidelines for the definitions used for public communications and statistics within the international network of the IBM. Below you find a short overview over the most important definitions, that are based on previous work by Richard Zink in 2009 (Table 1).

## 4.1 Age class

*Table 1: Calendar years (cy) should be used as IBM-standard for age classification. This table should serve as a general standard for the age determination of unknown and known birds recorded in the IBM-database. Grey shaded = potentially breeding birds (see "checked pairs" below).*

| Entry in the IBM (life stage) | Calendar year (cy) | Real age (years) Jan-Feb \| Mar-Dec | | Life history event |
|---|---|---|---|---|
| juvenile (1. cy) | 1 | - | 0 | hatch |
| immature (2. cy) | 2 | 0 | 1 | non-territorial |
| immature (3. cy) | 3 | 1 | 2 | non-territorial |
| subadult (4. cy) | 4 | 2 | 3 | non-territorial |
| subadult (5. / 6. cy) | 5 | 3 | 4 | potential nesting |
| adult (≥ 6. cy) | 6 | 4 | 5 | potential breeding |
| adult (≥ 6. cy) | ≥7 | 5 | ≥6 | potential breeding |

## 4.2 Dropout versus breeding failures

Dropouts include all incidents where individuals have been removed from the population (mortality, recapture). This also applies to birds that could be rereleased after the recapture. A recapture is in any case the last solution, which is why it must be assumed that these birds would not have survived without human intervention and would have died under natural conditions.

However, if a hatchling dies at less than 80 days of age, this loss is referred to as breeding failure and it is therefore not included in the dropout statistics.

| Age | < 80 days | > 80 days | Type |
|---|---|---|---|
| hatch | → mortality / recapture | | → breeding failure |
| hatch | | → mortality, recapture | → dropout |

## 4.3 Reproduction[1]

*Table 2: IBM-standards for reproduction statistics based on previous work by R. Zink (2009).*

| | |
|---|---|
| Potential territory | Area occupied by at least 2 birds showing territorial behaviour<br>→ all territories entered in the IBM-database |
| Territorial pair[2] | Pair[2] occupying a territory with at least one nest<br>→ territories with nest or egg-lay date entered in the IBM-database |
| Checked pair[2] | Pair[2] monitored during the breeding season<br>→ territories with nest or egg-lay date entered in the IBM-database<br>→ age classification: subadult (5. / 6. cy) or adult (≥ 6. cy) |
| Breeding pair[2] | Cases of verified egg-laying<br>→ date of egg-laying entered in the IBM-database |
| Breeding success | $\frac{fledglings}{breeding\ pairs}$ |
| Productivity | $\frac{fledglings}{checked\ pairs}$ |

*1 Based on: Monitoring guide (Protocol) Draft Version 0.2 (2009) by Richard Zink*

*2 Definition of a pair: At least two birds occupying a territory with at least one nest or confirmed fledge*

# 5 Releases

In 2024, a total of 24 Bearded Vultures were released across eight locations in the eastern and central Alps, the western Pre-Alps, the Massif Central, Corsica, and two sites in Spain (Figure 1). These birds were raised in ten different zoos and captive breeding centres participating in the European Endangered Species Programme (EEP). To sustain a healthy captive breeding population, a limited number of juvenile birds are retained within the breeding network each year. The EEP coordinator carefully balances the release of birds with the need to maintain and distribute breeding stock. Due to an exceptionally successful breeding season, the number of released individuals once again exceeded the previous year's total, in accordance with the EEP's release strategy.

In the Alps two juveniles were released in Berchtesgaden (Germany) in order to enforce the population towards the eastern Alps. In France, two birds were released in both Baronnies and Vercors (Western Pre-Alps) in the framework of LIFE GypAct, while three juveniles from rare genetic lineages were released in the central Alps at Melchsee-Frutt (Switzerland) to further enhance genetic diversity of the Alpine population.

In the so-called "corridor-regions", four birds were released in the Massif Central (France, LIFE GypAct), as well as three juveniles in Maestrazgo (Spain). These releases align with the long-term objective of restoring genetic exchange between the isolated Bearded Vulture populations of the Alps, Pyrenees, and Andalusia. The reconnection of these populations is crucial for the restoration of a viable European metapopulation, especially after the historical extinction of the Alpine (1913) and the Andalusian population (1986). Genetic exchange is essential for maintaining the long-term health and viability of populations, especially in newly reintroduced populations where the risk of inbreeding is elevated.

Through the release of two birds in Corsica (France, LIFE GypRescue) and six juveniles in Andalusia (Spain), conservation efforts seek to bolster local populations. While the Andalusian population continues to expand steadily, natural growth in Corsica has stagnated in recent years.

With the exception of Torreferrussa (BG1209), who was killed by a fox at the hacking site, all released birds successfully fledged, with an average age of 124 days at first flight. The youngest bird to fledge was Oeil Rouge (BG1198, Baronnies) at 107 days, while the oldest were Piuma (BG1239, Corsica) and Gea (BG1214, Maestrazgo), both at 136 days.

## 5.1 Release sites 2024

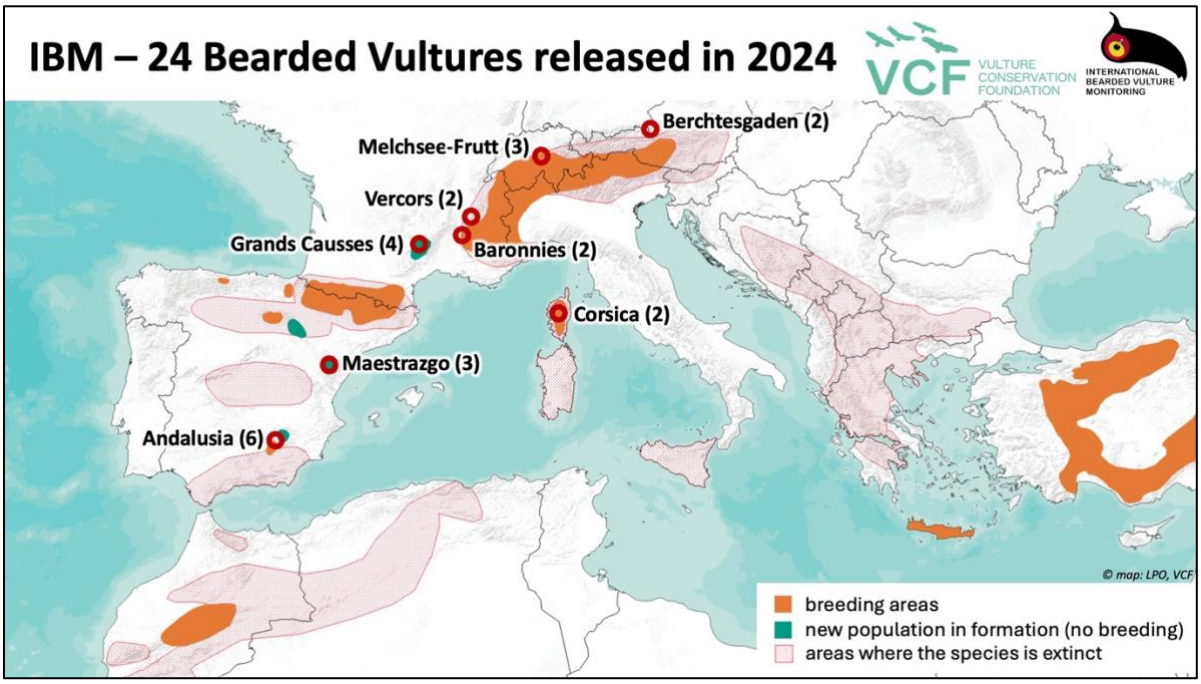



*Figure 1: 24 Bearded Vultures were released at eight sites in Germany, France, Spain and Switzerland in 2024.*

*Table 3: Details about 24 Bearded Vultures that have been released within the IBM monitoring area. Birds that died or had to be recaptured in 2024 are written with grey letters (more information see Table 20).*

| | Release site | BirdID | Name | Sex | Hatch | Fledge | Age at first flight (days) | Place hatch | Release |
|---|---|---|---|---|---|---|---|---|---|
| CHE | Melchsee-Frutt | BGBG1234 | Aurora | f | 28/02 | 06/07 | 129 | RFZ Haringsee (AUT) | 06/06 |
| | | BGBG1213 | Paradiso | m | 21/02 | 12/06 | 112 | Beauval Zoo (FRA) | 06/06 |
| | | BGBG1212 | Gaia | f | 21/02 | 25/06 | 125 | Torreferrussa (ESP) | 06/06 |
| FRA | Baronnies, Léoux Valley | BGBG1201 | Meravilha | f | 06/02 | 07/06 | 122 | Ostrava Zoo (CZE) | 03/05 |
| | | BGBG1198 | Oeil Rouge | m | 25/01 | 11/05 | 107 | RFZ Haringsee (AUT) | 03/05 |
| | Corsica, Ghisoni | BGBG1239 | Piuma | f | 12/03 | 26/07 | 136 | RFZ Haringsee (AUT) | 10/06 |
| | | BGBG1233 | Culomba | f | 06/03 | 03/07 | 119 | RFZ Haringsee (AUT) | 10/06 |
| | Grands Causses,Frépestel | BGBG1207 | Tornade | f | 14/02 | 18/06 | 125 | CC Guadalentín (ESP) | 13/05 |
| | | BGBG1202 | Terre | f | 08/02 | 18/06 | 131 | CC Guadalentín (ESP) | 13/05 |
| | | BGBG1242 | Tourmente | f | 19/03 | 24/07 | 127 | Ostrava Zoo (CZE) | 18/06 |
| | | BGBG1238 | Tarn | f | 11/03 | 23/07 | 134 | CC Guadalentín (ESP) | 18/06 |
| | PNR Vercors, Trechenu-Creyers | BGBG1229 | Boréale | f | 04/03 | 03/07 | 121 | CC Guadalentín (ESP) | 27/05 |
| | | BGBG1221 | Fuego | f | 26/02 | 02/07 | 127 | CC Guadalentín (ESP) | 27/05 |
| GER | Berchtesgaden, Halsgrube | BGBG1240 | Wiggerl | m | 02/03 | 30/06 | 120 | Helsinki Zoo (FIN) | 29/05 |
| | | BGBG1227 | Vinzenz | m | 03/03 | 25/06 | 114 | RFZ Haringsee (AUT) | 29/05 |
| ESP | PN Sierra Nevada | BGBG1248 | Dilar | m | 15/03 | 13/07 | 120 | Aragón Pyrenees (ESP) | 11/06 |
| | | BGBG1237 | Sulayr | f | 09/03 | 12/07 | 125 | Aragón Pyrenees (ESP) | 11/06 |
| | | BGBG1245 | Veleta | f | 24/03 | 26/07 | 124 | RFZ Haringsee (AUT) | 26/06 |
| | NP Cazorla, Segura y Las Villas | BGBG1209 | Torreferrussa | f | 17/02 | | | Torreferrussa (ESP) | 14/05 |
| | | BGBG1219 | Alfranca | f | 12/02 | 25/06 | 134 | Aragón Pyrenees | 27/05 |
| | | BGBG1247 | Tiscar | f | 25/03 | 06/08 | 134 | Tallinn (EST) | 28/06 |
| | Tinença de Benifassà | BGBG1225 | Genista | f | 29/02 | 07/07 | 129 | Alpenzoo Innsbruck (AUT) | 04/06 |
| | | BGBG1215 | Guaita | f | 25/02 | 14/06 | 110 | CC Guadalentín (ESP) | 04/06 |
| | | BGBG1214 | Gea | f | 22/02 | 07/07 | 136 | Liberec Zoo (CZE) | 04/06 |
| | **24 released Bearded Vultures** | | | | | | **ø124** | | |

# 6 Reproduction in the wild

## 6.1 Breeding season 2023/2024

In 2024, the International Bearded Vulture Monitoring Network (IBM) monitored 104 established Bearded Vulture territories, including 100 territorial pairs and 4 trios. Successful clutches were documented in 89 of these territories. Notably, among the 19 territories with no prior breeding records, 10 initiated their first breeding attempts and six achieved their first successful reproduction (Switzerland: Sefinental, Stalden; France: Encombres and Valgaudemar; Italy: Rabbi and Gran San Bernardo).

Overall, the IBM reported 29 breeding failures but also a record-high 61 successful reproductions. Within the Alpine range, 85 of the 94 territorial pairs/trios produced clutches, resulting in 72 hatched chicks (85% breeding success). By the end of the summer, 61 young Bearded Vultures successfully fledged, distributed as follows: 24 in Switzerland, 17 in France, 14 in Italy, and 6 in Austria (Figure 3).

On Corsica, all 4 known territories were occupied. Even though, breeding was reported from all territories, a hatch was only reported from Evisa. Unfortunately, the chick did not survive, resulting in no successful breeding for the fourth year in a row (last breeding success in 2020 and 2018).

In the Massif Central, a second breeding territory has been established by the released birds Calandretto 2017 & Aven 2020, in addition to the male pair (Adonis 2014 & Layrou 2013) that has been present since 2018**.** These developments represent significant progress toward the first breeding in this region, that should serve as a stepping-stone between Alpine and Pyrenean populations.

In Andalusia, out of 12 monitored territories, a clutch was reported in nine territories. From five chicks that hatched, four juveniles fledged successfully (Vadillo, Castrileña, Nica, Simón).

The overall breeding success of 72% varied considerably over the regions, with 3 fledglings in the eastern (50%), 8 in the south-western (80%), 25 in the north-western (76%) and 25 in the central Alps (69%). Following a peak breeding success rate of 83% in the eastern Alps last year, both breeding success and productivity in the region have sharply declined this season. This fluctuation underscores the significant annual variability in reproductive outcomes of this region.

While breeding success represents the ratio of fledglings to clutches, productivity takes into account territories occupied by mature, non-breeding birds. This makes it a more accurate measure of reproductive success, especially in newly establishing populations. In recent years, breeding success and productivity in the peripheral regions of the Alps - particularly the eastern and south-western areas - have lagged behind those in the north-western and central Alps. However, for the first time, the south-western region has now surpassed the other regions in these key metrics. At 66%, average productivity in the Alps was significantly lower than in 2023 (73%), but comparable to levels in 2022 (67%) and 2021 (65%).

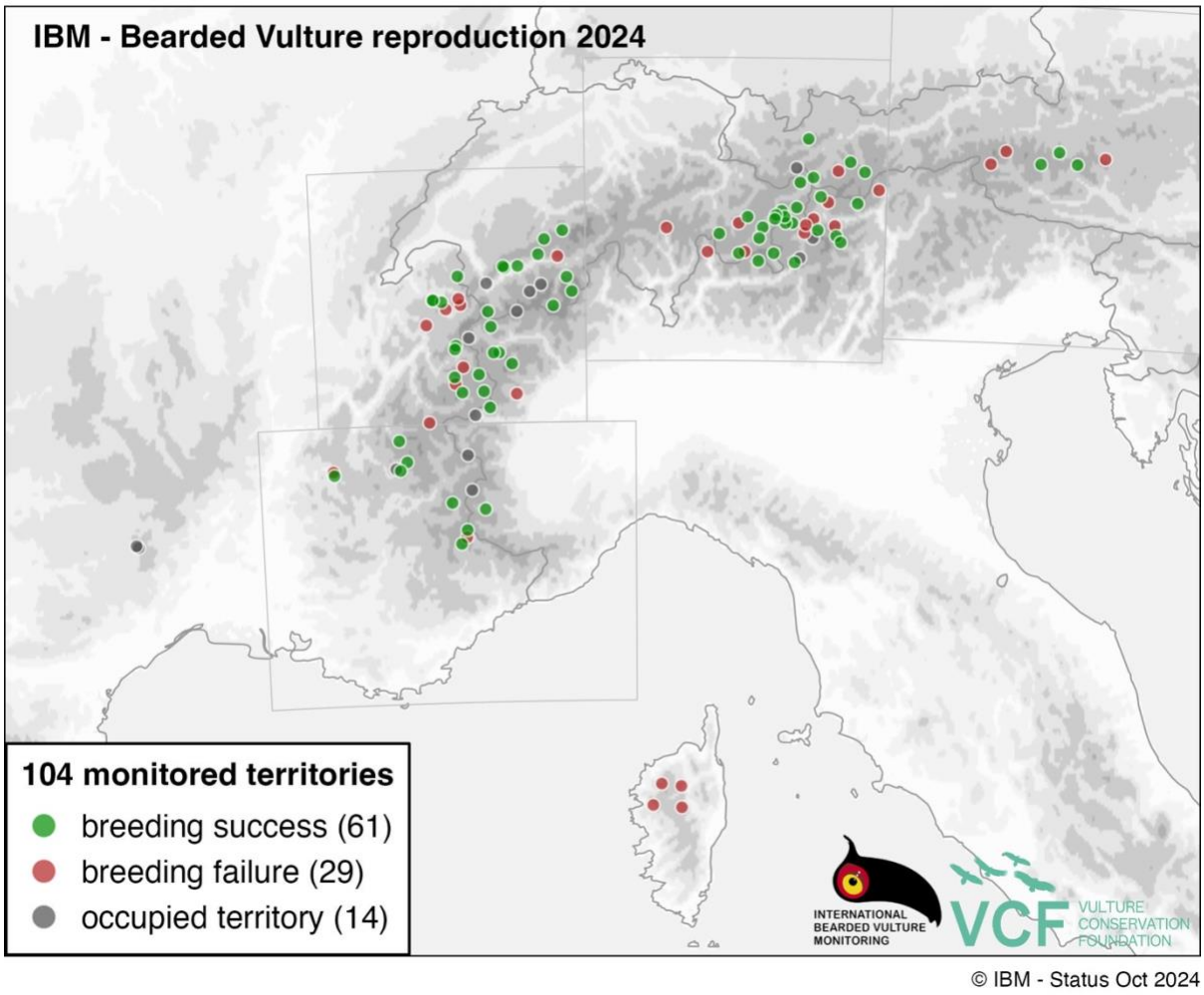



*Figure 2: Reproduction status in 104 monitored territories in the Alpine range, Corsica and the Massif Central. With 61 successful reproductions a new record number of wild fledglings has been set. In the Massif Central, a second breeding territory has been established, in addition to the male pair that has been present since 2018. Despite breeding attempts in four territories, no chick fledged on Corsica. The rectangles represent the 4 monitoring zones: south-western Alps, north-western Alps, central Alps and eastern Alps, from left to right.*

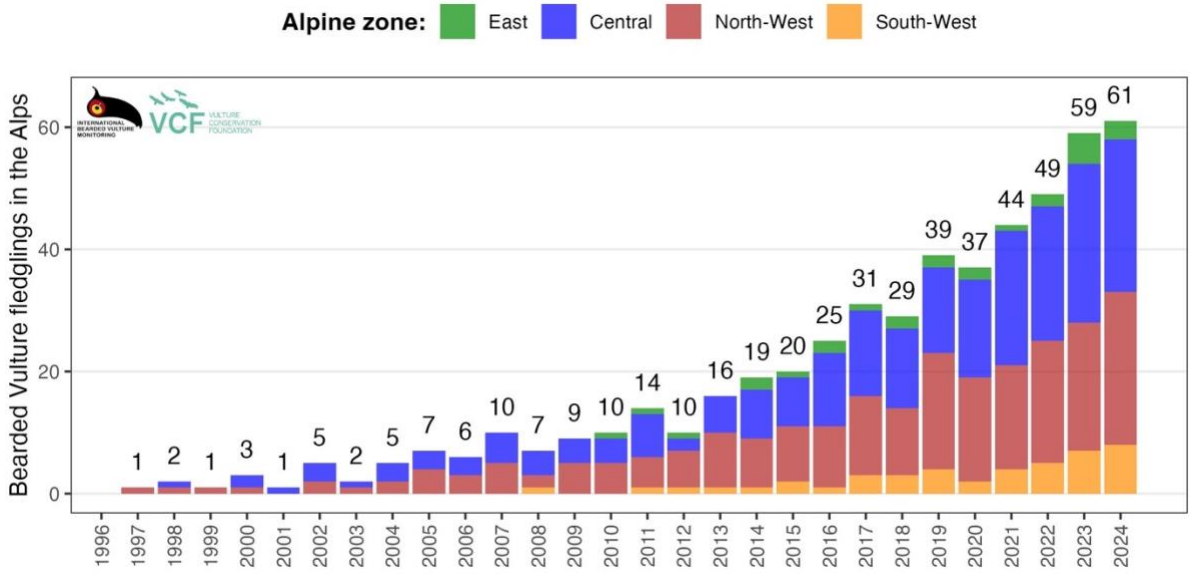



*Figure 3. Fledglings per year in the Alpine region, since the first establishment of a pair in 1996.*

*Table 4: Breeding statistics for the season 2023/2024. See Table 2 for further details about the IBM-standards for breeding statistics.*

| | Zone | Potential territories | Territorial pairs | Checked pairs | Breeding pairs | Hatches | Fledglings | Failures | Breeding success | Productivity |
|---|---|---|---|---|---|---|---|---|---|---|
| Alpine range | **2024** | **99** | **94** | **92** | **85** | **72** | **61** | **25** | **72%** | **66%** |
| | East | 6 | 6 | 6 | 6 | 4 | 3 | 3 | 50% | 50% |
| | Central | 39 | 38 | 38 | 36 | 28 | 25 | 11 | 69% | 66% |
| | North-West | 39 | 37 | 37 | 33 | 30 | 25 | 9 | 76% | 68% |
| | South-West | 14 | 13 | 11 | 10 | 10 | 8 | 2 | 80% | 73% |
| | **2023** | **84** | **82** | **81** | **76** | **69** | **59** | **17** | **78%** | **73%** |
| | East | 6 | 6 | 6 | 6 | 6 | 5 | 1 | 83% | 83% |
| | Central | 36 | 35 | 35 | 31 | 29 | 26 | 5 | 84% | 74% |
| | North-West | 31 | 31 | 31 | 31 | 26 | 21 | 10 | 68% | 68% |
| | South-West | 11 | 10 | 9 | 8 | 8 | 7 | 1 | 88% | 78% |
| | **2022** | **78** | **74** | **73** | **67** | **61** | **49** | **18** | **73%** | **67%** |
| | East | 6 | 6 | 6 | 5 | 3 | 2 | 3 | 40% | 33% |
| | Central | 32 | 30 | 30 | 28 | 25 | 22 | 6 | 79% | 73% |
| | North-West | 30 | 29 | 29 | 27 | 26 | 20 | 7 | 74% | 69% |
| | South-West | 10 | 9 | 8 | 7 | 7 | 5 | 2 | 71% | 62% |
| **Corsica** | | | | | | | | | | |
| | 2024 | 4 | 4 | 4 | 4 | 1 | 0 | 4 | 0% | 0% |
| | 2023 | 3 | 2 | 2 | 2 | 1 | 0 | 2 | 0% | 0% |
| | 2022 | 2 | 2 | 2 | 2 | 2 | 0 | 2 | 0% | 0% |
| **Massif Central** | | | | | | | | | | |
| | 2024 | 2 | 2 | 2 | 0 | 0 | 0 | 0 | - | - |
| | 2023 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | - | - |
| | 2022 | 1 | 1 | 1 | 0 | 0 | 0 | 0 | - | - |

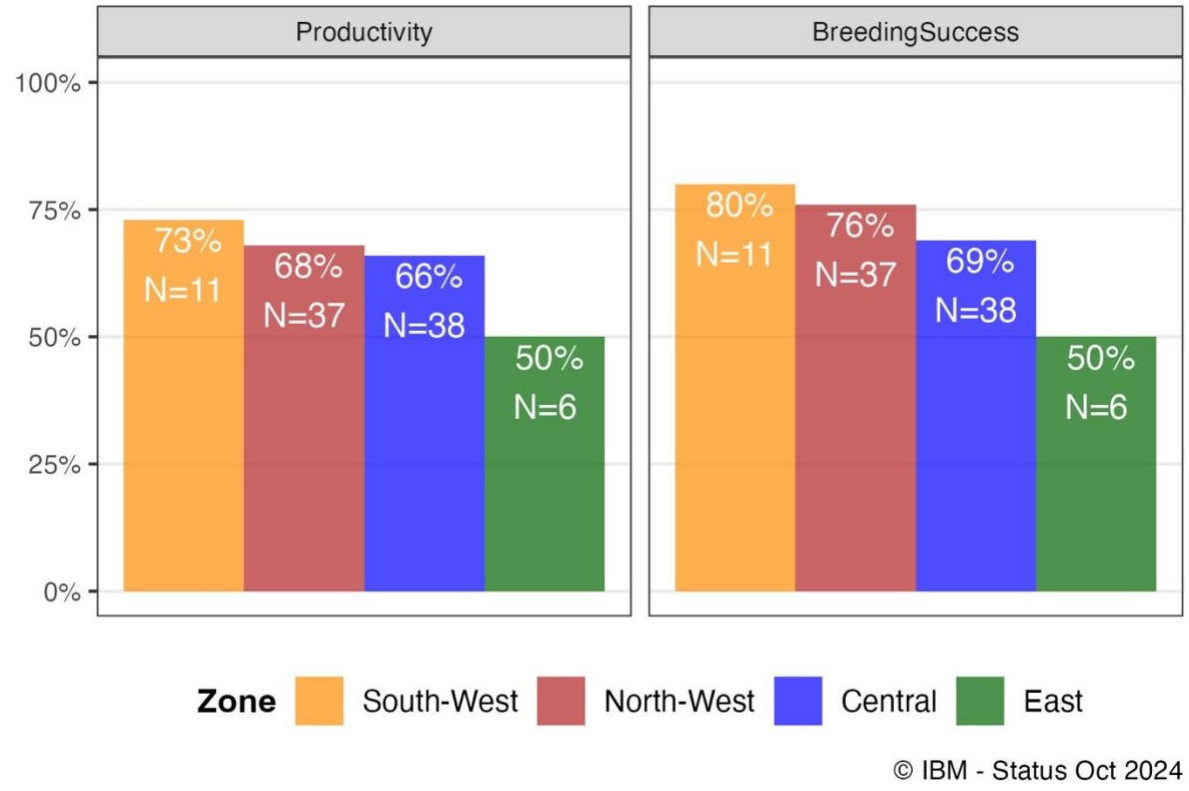



*Figure 4: Compared to the last years, productivity and breeding success vary much less within the different alpine zones with the highest productivity and breeding success in the eastern Alps. Note that sample size N (breeding territories) varies considerably among regions. See Table 2 for further details about the IBM-standards for breeding statistics.*

*Table 5: Reproduction in the eastern and central Alpine range. Territories with no clutch in previous years are marked with an asterisk (*).*

| | Territory | Nest | Parent1 | Parent2 | Parent3 | Clutch | Hatch | Fledge | Failure | Chick | First breeding | First fledge | Total clutches | Total chicks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Alps total** | **98** | **94** | **98** | **98** | **4** | **85** | **72** | **61** | **25** | **72** | **1996** | **1997** | **741** | **522** |
| **Eastern Alps** | **6** | **6** | **6** | **6** | **1** | **6** | **4** | **3** | **3** | **4** | **2001** | **2010** | **55** | **26** |
| AUT | Gastein/Rauris | x | Andreas Hofer | Alexa | - | 14/01 (±3) | 12/03 (±1) | 18/07 (±5) | - | Gastein/Rauris2024 (W0594) | 2003 | 2010 | 22 | 9 |
| | Gschlöß | x | Pinzgarus | Glocknerlady | - | 08/01 (±2) | - | - | 10/01 | - | 2014 | 2023 | 6 | 1 |
| | Heiligenblut | x | Fortuna | Ambo | - | 21/01 | 15/03 (±1) | 10/07 | - | Heiligenblut2024 (W0596) | 2001 | 2023 | 3 | 2 |
| | Katschberg | x | Hubertus 2 | Romaris | - | 05/01 (±1) | 01/03 (±2) | - | 13/03 | Katschberg2024 (W0648) | 2010 | 2012 | 15 | 11 |
| | Mallnitz | x | Felix2 | Charlie | - | 24/01 (±1) | 18/03 (±1) | 08/07 (±1) | - | Mallnitz2024 (W0603) | 2022 | 2023 | 3 | 2 |
| | Prägraten | x | adult | Joker | El Dorado | 04/01 (±1) | - | - | 18/04 | - | 2018 | 2023 | 6 | 1 |
| **Central Alps** | **39** | **38** | **39** | **39** | **0** | **36** | **28** | **25** | **11** | **28** | **1998** | **1998** | **302** | **229** |
| | **5** | **5** | **5** | **5** | **0** | **4** | **3** | **3** | **1** | **3** | **2019** | **2019** | **13** | **11** |
| AUT | Kaunertal * | | adult | adult | - | 18/01 (±14) | - | - | 03/02 (±5) | - | 2024 | - | 1 | 0 |
| | Lechtal | | Madagaskar | Natura | - | 14/01 (±14) | 15/03 (±5) | 16/07 (±1) | - | Lechtal2024 (W0620) | 2019 | 2019 | 6 | 5 |
| | Paznauntal * | | adult | adult | - | - | - | - | - | - | - | - | 0 | 0 |
| | Pitztal | | adult | adult | - | 02/02 (±5) | 28/03 (±5) | 26/07 (±5) | - | Pitztal2024 (W0623) | 2023 | 2023 | 2 | 2 |
| | Ötztal | | Paolino-Zebru | Humboldt-Albula | - | 20/01 (±5) | 15/03 (±5) | 08/07 | - | Ötztal2024 (W0622) | 2021 | 2021 | 4 | 4 |
| | **19** | **19** | **19** | **19** | **0** | **19** | **16** | **14** | **5** | **16** | **2007** | **2007** | **166** | **126** |
| CHE | Albula | x | GT097 | Diana-Stelvio | - | 05/01 | 01/03 (±1) | 21/06 (±1) | - | Albula2024 (W0580) | 2008 | 2008 | 17 | 14 |
| | Avers | x | GT0152 | GT0201 | - | 20/01 (±10) | 15/03 (±8) | 03/07 (±6) | - | Avers2024 (W0610) | 2022 | 2022 | 3 | 3 |
| | Bergün | x | GT0116 | Martell | - | 20/01 (±1) | 16/03 (±1) | 11/07 | - | Bergün2024 (W0600) | 2016 | 2016 | 9 | 7 |
| | Buffalora | x | Ingenius | Retia | - | 06/01 (±5) | - | - | 15/03 (±6) | - | 2017 | 2017 | 8 | 5 |
| | Foraz | x | Pitschen-Tantermozza | GT031 | - | 20/01 (±8) | 15/03 (±5) | 05/07 (±2) | - | Foraz2024 (W0597) | 2012 | 2014 | 13 | 11 |
| | Maloja | x | wild-hatched (≥6.cy) | wild-hatched (≥6.cy) | - | 05/02 | 01/04 | 23/07 | - | Maloja2024 (W0616) | 2016 | 2016 | 8 | 4 |
| | Margna | x | Astrid-Livigno | wild-hatched (≥6.cy) | - | 15/01 (±4) | - | - | 20/04 (±3) | - | 2023 | 2023 | 2 | 1 |
| | Martina | x | wild-hatched (≥6.cy) | adult | - | 05/01 (±3) | 29/02 (±3) | 17/07 (±2) | - | Martina2024 (W0579) | 2020 | 2021 | 5 | 2 |
| | Müstair | x | wild-hatched (≥6.cy) | Bergün2016 | - | 20/01 (±20) | - | - | 15/02 (±20) | - | 2022 | 2022 | 3 | 2 |
| | NordOstTessin | x | adult | adult | - | 07/01 | 29/02 | - | 07/04 | NordOstTessin2024 (W0642) | 2021 | 2023 | 4 | 1 |
| | Ofenpass | x | Livigno | adult | - | 20/01 (±10) | 08/03 (±10) | 23/07 (±1) | - | Jenny-Ofenpass2024 (W0607) | 2007 | 2007 | 15 | 12 |
| | Ova Spin | x | GT100 | GT0171 | - | 01/01 (±1) | 04/03 (±1) | 28/06 | - | OvaSpin2024 (W0584) | 2015 | 2018 | 9 | 7 |
| | Pontresina | x | wild-hatched (≥6.cy) | GT0163 | - | 15/01 | 10/03 (±1) | 07/07 | - | Pontresina2024 (W0589) | 2019 | 2019 | 6 | 6 |
| | Poschiavo | x | GT057 | GT038 | - | 11/01 | 05/03 (±1) | 30/06 (±1) | - | Poschiavo2024 (W0586) | 2013 | 2013 | 12 | 12 |
| | Sinestra | x | Samuel | Moische-Livigno | - | 18/01 (±1) | 13/03 (±2) | 08/07 (±4) | - | Sinestra2024 (W0625) | 2012 | 2013 | 13 | 10 |
| | Spöl | x | wild-hatched (≥6.cy) | GT0090 | - | 01/01 (±2) | 22/02 (±2) | 01/07 (±5) | - | Spöl2024 (W0576) | 2014 | 2014 | 9 | 7 |
| | Tantermozza | x | Zebru | GT048 | - | 10/01 (±5) | 05/03 (±5) | 15/07 (±3) | - | Tantermozza2024 (W0598) | 2007 | 2007 | 18 | 14 |
| | Tinizong | x | Cravallo | Inge | - | 20/01 (±10) | 20/03 (±8) | - | 18/04 (±10) | Tinizong2024 (W0613) | 2020 | 2021 | 5 | 2 |
| | Trupchun | x | Urbano | GT062 | - | 01/02 (±10) | 20/03 (±2) | 02/07 (±7) | - | Trupchun2024 (W0604) | 2017 | 2019 | 8 | 6 |
| | **15** | **14** | **15** | **15** | **0** | **13** | **9** | **8** | **5** | **9** | 1998 | 1998 | 123 | 92 |
| ITA | Chiavenna | x | adult | adult | - | 08/01 (±2) | - | - | 01/02 (±10) | - | 2023 | - | 2 | 0 |
| | Foscagno | x | adult | GT0129 | - | 10/02 (±5) | 08/04 (±5) | 06/08 (±1) | - | Foscagno2024 (W0646) | 2011 | 2011 | 2 | 2 |
| | Laas * | x | adult | adult | - | 19/01 (±3) | - | - | 12/03 (±3) | - | 2024 | - | 1 | - |
| | Livigno | x | Cic | Moische | - | 18/01 (±2) | 13/03 (±2) | 12/07 (±1) | - | Fopel (W0595) | 1999 | 2000 | 26 | 22 |
| | Ortler | x | adult | Jo | - | 02/02 | 27/03 | 02/07 | - | Sielva (W0629) | 2016 | 2017 | 9 | 7 |
| | Passeier * | x | Caeli | adult | - | 25/01 | - | - | 20/03 | - | 2024 | - | 1 | - |
| | Planeil | x | Haristraufu | adult | - | 08/03 | 10/04 (±7) | - | 11/06 (±30) | Planeil2024 (W0633) | 2013 | 2021 | 9 | 3 |
| | Rabbi * | x | adult | adult | - | 19/01 (±1) | 13/03 (±1) | 16/07 | - | Marco-Rabbi2024 (W0626) | 2024 | 2024 | 1 | 1 |
| | Reschen-Resia | x | Kilian | adult | - | 03/02 (±3) | 27/03 (±3) | 15/07 | - | Reschen-Resia2024 (W0614) | 2022 | 2022 | 3 | 2 |
| | Schnals | x | adult | adult | - | 09/01 (±3) | 03/03 (±10) | 05/07 (±3) | - | Schnals2024 (W0583) | 2013 | 2018 | 8 | 7 |
| | Sondalo * | - | adult | adult | - | - | - | - | - | - | - | - | - | - |
| | Sondrio | x | Ecureuil-Maloja | Balmat | - | 20/12 (±4) | 12/02 (±4) | 10/06 (±3) | - | Tiziana (W0647) | 2021 | 2023 | 4 | 2 |
| | Val Martello | x | adult | Temperatio | - | 20/01 | 22/03 | 30/06 | - | Peder (W0628) | 2015 | 2015 | 10 | 10 |
| | Valle del Braulio | x | adult | Stift | - | 15/01 (±2) | - | - | 12/02 (±15) | - | 1998 | 1998 | 26 | 17 |
| | Zebru | x | Heinz-Serraglio | Felice | - | - | - | - | - | - | 2002 | 2002 | 21 | 19 |

*Table 6: Reproduction in the north-western Alpine range. Territories with no clutch in previous years are marked with an asterisk (*).*

| | Territory | Nest | Parent1 | Parent2 | Parent3 | Clutch | Hatch | Fledge | Failure | Chick | First breeding | First fledge | Total clutches | Total chicks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| North-West | 40 | 37 | 40 | 40 | 2 | 33 | 30 | 25 | 9 | 30 | 1996 | 1997 | 320 | 223 |
| | **15** | **12** | **15** | **15** | **1** | **11** | **10** | **10** | **1** | **10** | **2007** | **2007** | **76** | **61** |
| CHE | Anniviers * | - | subadult (4.cy) | subadult (5./6.cy) | - | - | - | - | - | - | - | - | - | - |
| | Bagnes | x | adult | adult | - | - | - | - | - | - | 2016 | 2016 | 5 | 3 |
| | Coude du Rhône | x | adult | adult | - | - | - | - | - | - | 2019 | 2019 | 5 | 4 |
| | Derborence_Vérouet | x | Pablo | Guillaumes | - | 01/02 (±12) | 24/03 (±8) | 24/07 | - | Deborence_Vérouet2024 (W0644) | 2007 | 2007 | 13 | 8 |
| | Derborence_down | x | adult | adult | - | 29/12 | 23/02 (±4) | 21/06 (±4) | - | Derborence_down2024 (W0570) | 2012 | 2012 | 12 | 11 |
| | Kandertal | x | GT0138 | GT0126 | - | 24/01 | 17/03 | 30/07 (±10) | - | Kandertal2024 (W0627) | 2020 | 2020 | 5 | 5 |
| | Leukerbad | x | adult | adult | adult | 22/01 (±1) | 16/03 (±3) | 14/07 | - | Leukerbad2024 (W0599) | 2012 | 2015 | 9 | 7 |
| | Niedergesteln | x | adult | Ginko | - | 21/12 (±22) | - | - | 05/02 (±22) | - | 2022 | 2023 | 2 | 1 |
| | Saas | x | adult | Silvan-Tantermozza | - | 27/12 (±4) | 01/03 (±1) | 09/06 | - | Saas2024 (W0573) | 2019 | 2019 | 6 | 6 |
| | Sefinental * | - | adult | adult | - | 06/01 (±20) | 06/03 (±20) | 09/07 (±10) | - | Sefinental2024 (W0637) | 2024 | 2024 | 1 | 1 |
| | Sionne | x | adult | adult | - | 05/01 (±6) | 29/02 (±8) | 27/06 (±4) | - | Sionne2024 (W0578) | 2019 | 2019 | 5 | 4 |
| | Stalden VS * | x | adult | subad / adult (?) | - | 27/12 (±4) | 22/02 (±7) | 09/07 (±2) | - | Stalden2024 (W0569) | - | - | - | - |
| | Val Ferret | x | adult | adult | - | 23/01 | 17/03 | 23/07 | - | ValFerret2024 (W0602) | 2023 | 2023 | 2 | 2 |
| | Val d'Hérens * | - | Cierzo | subadult (5./6.cy) | - | - | - | - | - | - | - | - | - | - |
| | Zermatt | x | Smaragd | adult | - | 01/01 (±30) | 01/03 (±30) | 01/07 (±30) | - | Zermatt2024 (W0624) | 2016 | 2016 | 9 | 8 |
| | **18** | **18** | **18** | **18** | **1** | **17** | **15** | **10** | **8** | **15** | **1996** | **1997** | **191** | **123** |
| FRA | Andagne | | Nonno Bob | Junior Ranger | - | 14/02 | 10/04 | 07/08 | - | Farra (W0634) | 2011 | 2014 | 11 | 7 |
| | Aravis | | adult | adult | - | 03/01 (±1) | 28/02 (±3) | 22/06 (±1) | - | Luz (W0577) | 2006 | 2009 | 19 | 12 |
| | Aravis Sud74 * | | Lapie | Girun | - | 18/02 (±2) | - | - | 25/02 | - | 2024 | - | 1 | 0 |
| | Ardoisieres | | Gypsy | adult | - | 04/02 (±1) | 30/03 | 26/07 (±1) | - | Timo (W0615) | 2023 | 2023 | 2 | 2 |
| | Bargy | | wild-hatched (≥6.cy) | wild-hatched (≥6.cy) | wild-hatched (≥6.cy) | 19/01 (±5) | 14/03 (±1) | 19/07 | - | Genep (W0609) | 1996 | 1997 | 28 | 21 |
| | Bargy BIS | | adult | adult | - | 22/01 (±2) | 19/03 (±1) | 26/06 (±1) | - | Asters (W0612) | 2016 | 2017 | 9 | 6 |
| | Bourg-Saint-Maurice | | adult | adult | - | 25/01 | 21/03 | 10/07 | - | BS-Maurice2024 (W0636) | 2016 | 2017 | 9 | 7 |
| | Bourg-Saint-Maurice-2 | | Schils | Aschka | - | 14/01 | 08/03 | 04/07 | - | Fortiche (W0630) | 2020 | 2023 | 4 | 2 |
| | Bramans | | adult | Costa | - | 09/01 | 06/03 | - | 24/03 | Bramans2024 (W0587) | 2022 | 2022 | 3 | 2 |
| | Emcombres * | | adult | adult | - | 13/01 | 08/03 | 10/08 | - | Ardoise (W0632) | 2024 | 2024 | 1 | 1 |
| | Passy | | adult | adult | - | 14/01 (±17) | 10/03 (±15) | - | 10/05 (±15) | Passy2024 (W0643) | 2022 | 2022 | 3 | 2 |
| | Peisey-Nancroix | | adult | adult | - | 09/01 | - | - | 06/03 | - | 2005 | 2005 | 20 | 15 |
| | Pierre Fendue | | Neige | rène-Derborence dowı | - | 18/01 (±1) | 11/03 (±1) | - | 20/06 (±2) | PierreFendue2024 (W0591) | 2023 | - | 2 | 0 |
| | Pralognan | | GT0054 | adult | - | - | - | - | 26/11 | - | 2018 | 2018 | 6 | 5 |
| | Sixt Fiz | | adult | adult | - | 30/12 | 22/02 | - | 15/03 (±1) | SixtFiz2024 (W0575) | 2007 | 2009 | 18 | 9 |
| | Termignon | | adult | adult | - | 08/01 | 02/03 | 15/07 | - | Termignon2024 (W0582) | 2002 | 2002 | 23 | 16 |
| | Val dIsère | | Republic 3 | Jausiers | - | 12/01 | 17/03 | 24/07 | - | Franchet (W0631) | 1999 | 2002 | 25 | 15 |
| | Valloire | | adult | adult | - | 19/02 | 15/04 | - | 17/06 | Valloire2024 (W0635) | 2022 | 2022 | 3 | 1 |
| | **7** | **7** | **7** | **7** | **0** | **5** | **5** | **5** | **0** | **5** | **2010** | **2012** | **53** | **39** |
| ITA | Chamoussière | | adult | adult | - | 18/01 | 12/03 | 13/07 | - | Chamoussiere2024 (W0593) | 2011 | 2012 | 14 | 10 |
| | Gran San Bernardo * | | adult | adult | - | 01/02 (±15) | 01/04 (±15) | 20/07 (±5) | - | GranSanBernado2023 (W0645) | 2024 | 2024 | 1 | 1 |
| | MVG * | | Léoux | subadult (5./6.cy) | - | - | - | - | - | - | - | - | 0 | 0 |
| | Usseglio | | Italia 150 | adult | - | 19/01 (±1) | 14/03 (±3) | 25/07 | - | Aries (W0608) | 2019 | 2019 | 6 | 5 |
| | Val di Rhemes | | adult | Sallanches | - | 19/01 (±1) | 16/03 (±1) | 28/06 | - | Rhemes2024 (W0611) | 2010 | 2012 | 13 | 10 |
| | Valdigne | | adult | adult | - | - | - | - | - | - | 2010 | 2019 | 6 | 4 |
| | Valnontey | | GT0167 | Fontvieille | - | 27/12 (±1) | 19/02 (±1) | 16/06 (±1) | - | Valnontey2024 (W0574) | 2015 | 2015 | 10 | 9 |

*Table 7: Reproduction in the south-western Alpine range. Territories with no clutch in previous years are marked with an asterisk (*).*

| | Territory | Nest | Parent1 | Parent2 | Parent3 | Clutch | Hatch | Fledge | Failure | Chick | First breeding | First fledge | Total clutches | Total chicks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **South-West** | **13** | **13** | **13** | **13** | **1** | **10** | **10** | **8** | **2** | **10** | **2008** | **2008** | **64** | **44** |
| | **11** | **11** | **11** | **11** | **1** | **9** | **9** | **7** | **2** | **9** | **2008** | **2008** | **62** | **42** |
| FRA | Ambane | | Stephan | Gerlinde | - | 15/01 (±2) | 04/03 (±2) | - | 19/04 | Ambane2024 (W0606) | 2022 | 2022 | 2 | 1 |
| FRA | Archiane | | adult | Pamela (5./6.cy) | - | 22/01 (±5) | 11/03 (±2) | 07/07 (±1) | - | Croze (W0592) | 2023 | 2023 | 2 | 2 |
| FRA | Bonette | | Py | Bellemotte | - | 07/01 (±1) | 01/03 (±5) | 04/07 (±1) | - | Alpi (W0581) | 2017 | 2017 | 8 | 8 |
| FRA | Chambeyron-Ubayette | | Cassos | Rimani | - | 03/02 (±4) | 01/04 (±2) | 16/08 | - | Geny (W0617) | 2016 | 2020 | 9 | 4 |
| FRA | Malaval | | Basalte | adult | adult | 03/01 | 25/02 | 18/06 | - | Malaval (W0621) | 2018 | 2018 | 7 | 5 |
| FRA | Molines Chp * | | Novo (3.cy) | Elvio (5./6.cy) | - | - | - | - | - | - | - | - | 0 | 0 |
| FRA | Source de lUbaye | | Sereno | subadult (4.cy) | - | - | - | - | - | - | 2008 | 2008 | 13 | 10 |
| FRA | Source de la Tinée | | Rocca | Girasole | - | 18/01 (±1) | 10/03 (±3) | - | 29/04 (±4) | Tinee2024 (W0590) | 2013 | 2015 | 11 | 6 |
| FRA | Val dEntraunes | | Tenao | adult | - | 10/01 (±5) | 07/03 (±5) | 02/07 (±1) | - | Roche Grande (W0588) | 2019 | 2022 | 6 | 3 |
| FRA | Valgaudemar * | | bright head | wild-hatched (5./6.cy) | - | 12/02 | 03/04 | 01/08 | - | Valgaudemar (W0618) | 2024 | 2024 | 1 | 1 |
| FRA | Veneon1 | | Mison | adult | - | 02/01 | 25/02 (±1) | 22/06 (±2) | - | Veneon (W0571) | 2023 | 2023 | 2 | 2 |
| | **2** | **2** | **2** | **2** | **0** | **1** | **1** | **1** | **0** | **1** | **2023** | **2023** | **2** | **2** |
| ITA | Chevre * | x | adult | adult | - | - | - | - | - | - | - | - | - | - |
| ITA | Maira | x | Roman | adult | - | 01/02 | 28/03 (±2) | 23/07 | - | Paco Mauro (W0605) | 2023 | 2023 | 3 | 2 |

*Table 8: Reproduction in Corsica and the Massif Central. The IBM does not include reproduction data for Corsica before 2018. In the Massif Central, a second breeding territory has been established, in addition to the male pair that has been present since 2018. Territories with no clutch in previous years are marked with an asterisk (*).*

| | Territory | Nest | Parent1 | Parent2 | Parent3 | Clutch | Hatch | Fledge | Failure | Chick | First breeding | First fledge | Total clutches | Total chicks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Corsica** | | **4** | **4** | **4** | **0** | **4** | **1** | **0** | **4** | **1** | **2018** | **2018** | **17** | **2** |
| FRA | Bonifatu | x | Bonifatu 1 | Bonifatu 2 | - | 07/02 (±7) | - | - | 21/03 (±14) | - | 2013 | 2013 | 7 | 3 |
| FRA | Evisa | x | Luna | Muntagnolu | - | 22/01 (±5) | 04/03 (±10) | - | 13/05 (±13) | Evisa2024 (W0585) | 2024 | - | 1 | 0 |
| FRA | Popolasca | x | Popolasca 1 | Popolasca 2 | - | 18/01 | - | - | 22/01 | - | 2014 | 2014 | 7 | 1 |
| FRA | Restonica | x | Restonica 2 | subadult (5./6.cy) | - | 19/02 (±8) | - | - | 26/04 (±15) | - | 2019 | - | 2 | 0 |
| **Massif Central** | | **2** | **2** | **2** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** | **-** |
| FRA | Dargilan * | - | Calandreto | Aven (4.cy) | - | - | - | - | - | - | - | - | - | - |
| FRA | Jonte amont * | x | Layrou | Adonis | - | - | - | - | - | - | - | - | - | - |

# 7 Observations

## 7.1 IBM-network & -monitoring area

Bearded Vulture observations are collected within the area of the International Bearded Vulture Monitoring (IBM) network. Regional coordinators from national parks, regional nature parks or NGO's (Table 9) are responsible for a certain area (29 areas in 2024, see Figure 5), where the professionals collect and validate reported Bearded Vulture observations that are later stored in the IBM-database. In 2024 the monitoring network consisted of 22 IBM-partners and 4 associated organisations.

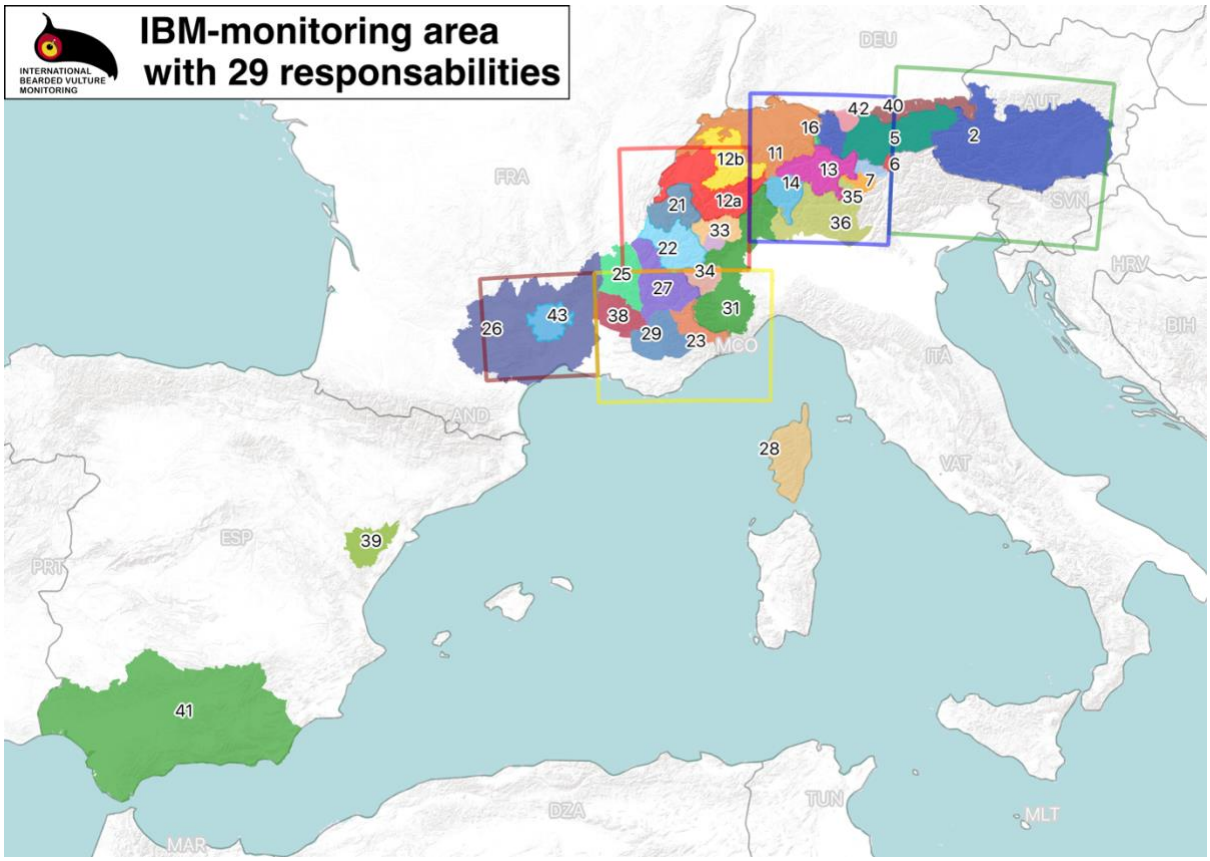



*Figure 5: 29 areas of responsibility that form the International Bearded Vulture Monitoring Network.*

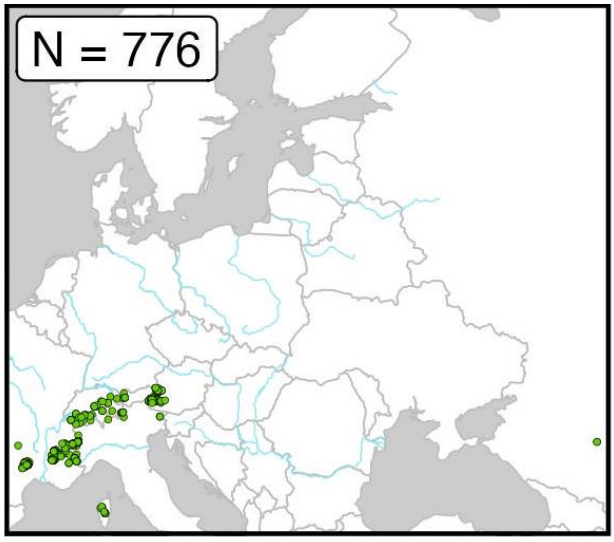
*Table 9: IBM-partners and associated organisations (*) that collect data within their area of responsibility. CCID = ID-Nr of the collecting centre.*

| CCID | Institution / Partner | Country |
|---|---|---|
| **2** | Hohe Tauern National Park | **AUT** |
| **5** | Naturparke Tirol* | |
| **11** | Stiftung Pro Bartgeier central | **CHE** |
| **12a** | Stiftung Pro Bartgeier north-west | |
| **12b** | Stiftung Pro Bartgeier south-west | |
| **13** | Stiftung Pro Bartgeier east | |
| **14** | Stiftung Pro Bartgeier south-west | |
| **39** | Maestrazgo - Els Ports | **ESP** |
| **41** | Junta de Andalucia | |
| **21** | ASTERS | **FRA** |
| **22** | Parc National de la Vanoise | |
| **23** | Parc National du Mercantour | |
| **25** | Parc Naturel Régional des Vercors | |
| **26** | LPO Grands Causses | |
| **27** | Envergures Alpines | |
| **28** | PNR de Corse | |
| **29** | GPFSA* | |
| **38** | Association Vautours en Baronnies | |
| **39** | Parc National des Écrins* | |
| **43** | National Park of Cévennes | |
| **40** | LBV - Landesbund für Vogelschutz in Bayern | **GER** |
| **42** | Alpinum | |
| **6** | Museum Hinterpassseier* | **ITA** |
| **7** | Provinz Bozen* | |
| **31** | Parco Naturale Alpi Marittime | |
| **33** | Regione Autonoma Valle d'Aosta* | |
| **33** | Parco Nazionale del Gran Paradiso | |
| **34** | Area protette delle Alpi Cozie | |
| **35** | Parco Nazionale dello Stelvio | |
| **36** | Sondrio Province* | |

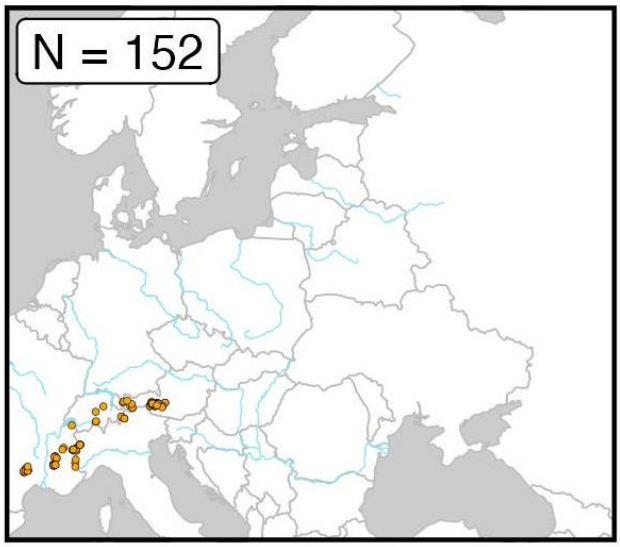
## 7.2 Visual observations

In 2024, 2’693 Bearded Vulture observations from 7 different countries in Europe have been registered in the IBM-database. For 776 (29%) observations it was possible to identify the observed individual, for 152 (6%) cases there are hypotheses about the bird’s identity, while it was not possible to identify the individuals in 1’765 (65%) observations (Figure 6).

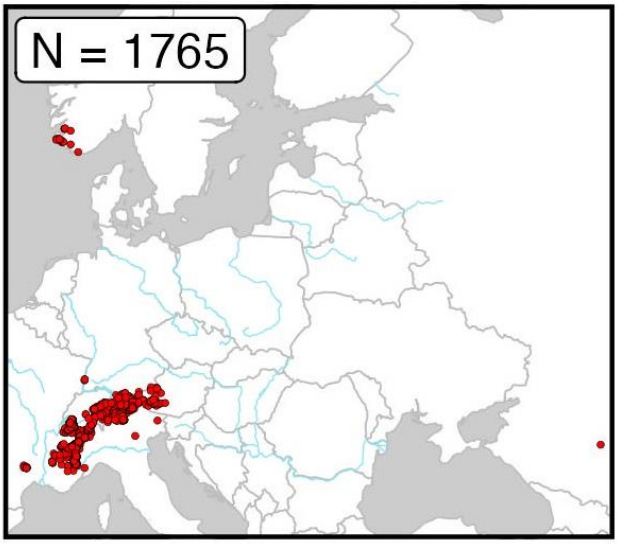
86 individuals (19 of them wild-hatched) were identified by at least one visual observation, while some birds have been observed and reported several times in 2024. Ten birds have even been observed over 20 times in 2024. The most frequently observed birds are Oeil Rouge (BG1198, Baronnies 2024) with 49 and Léoux (BG0950, Baronnies 2017) with 48 observations (Table 10).




Birds identified




Identification uncertain




Birds not identified

*Figure 6: Overview of the 2'693 Bearded Vulture observations that have been reported in 2024. In 29% of all observations the observed bird could be identified on the individual level (776 identifications).*

*Table 10: Overview of the first part of 2'693 observations from 7 different countries reported in the IBM-database for the year 2024. The older a bird is and the more often it has been observed, the darker it is high-lighted in green. The longer a bird has not been observed before 2024, the darker it is highlighted in red.*

| Bird | Sex | Age (cy) | Observed | | | AUT | CHE | DEU | FRA | ITA | LIE | NOR | Total | Ornitho | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | before period | in period | total | | | | | | | | | .ch | .de |
| Adonis (BG0794) | m | 11 | 26.12.23 | 26 | 353 | - | - | - | 26 | - | - | - | **26** | - | - |
| Alexa (BG0100) | f | 37 | 04.10.23 | 5 | 107 | 5 | - | - | - | - | - | - | **5** | - | - |
| Altitude (W0313) | f | 6 | 06.11.22 | 1 | 2 | - | - | - | 1 | - | - | - | **1** | - | - |
| Ambo (BG0392) | f | 23 | 14.10.23 | 4 | 127 | 4 | - | - | - | - | - | - | **4** | - | - |
| Andreas Hofer (BG0260) | m | 29 | 04.10.23 | 7 | 82 | 7 | - | - | - | - | - | - | **7** | - | - |
| Aries (W0608) | u | 1 | - | 17 | 17 | - | - | - | - | 17 | - | - | **17** | - | - |
| Aven (BG1067) | f | 5 | 27.12.23 | 37 | 97 | - | - | - | 37 | - | - | - | **37** | - | - |
| Baronnies (BG1163) | f | 2 | 28.12.23 | 7 | 31 | - | - | - | 6 | 1 | - | - | **7** | - | - |
| Basalte (BG0716) | m | 13 | 26.12.23 | 1 | 111 | - | - | - | 1 | - | - | - | **1** | - | - |
| Bavaria (BG1112) | f | 4 | 07.12.23 | 18 | 53 | 14 | - | 4 | - | - | - | - | **18** | - | - |
| BelArosa (BG1119) | m | 4 | 13.06.23 | 1 | 25 | - | 1 | - | - | - | - | - | **1** | - | - |
| Boréale (BG1229) | f | 1 | - | 9 | 9 | - | - | - | 8 | 1 | - | - | **9** | - | - |
| Calandreto (BG0948) | m | 8 | 16.12.23 | 27 | 150 | - | - | - | 27 | - | - | - | **27** | - | - |
| Charlie (BG0910) | f | 9 | 16.12.23 | 5 | 122 | 5 | - | - | - | - | - | - | **5** | - | - |
| Cierzo (BG0899) | m | 9 | 16.07.23 | 1 | 26 | - | 1 | - | - | - | - | - | **1** | - | - |
| Cintu (BG1042) | m | 6 | 23.03.23 | 1 | 6 | - | - | - | 1 | - | - | - | **1** | - | - |
| Croze (W0592) | u | 1 | - | 6 | 6 | - | - | - | 6 | - | - | - | **6** | - | - |
| Culomba (BG1233) | f | 1 | - | 2 | 2 | - | - | - | 2 | - | - | - | **2** | - | - |
| Cévennes (BG1032) | m | 6 | 16.12.23 | 7 | 72 | - | - | - | 7 | - | - | - | **7** | - | - |
| Dagmar (BG1145) | f | 3 | 15.11.23 | 6 | 16 | 2 | 3 | - | - | - | 1 | - | **6** | - | - |
| Dromie (BG1162) | m | 2 | 07.12.23 | 20 | 41 | - | - | - | 20 | - | - | - | **20** | - | - |
| Elfie (W0437) | f | 3 | - | 1 | 1 | - | 1 | - | - | - | - | - | **1** | - | - |
| Elvio (BG1026) | m | 6 | 26.12.23 | 6 | 84 | - | - | - | 6 | - | - | - | **6** | - | - |
| Ercu (BG0958) | m | 8 | 26.12.23 | 1 | 8 | - | - | - | 1 | - | - | - | **1** | - | - |
| Esprit (W0545) | f | 2 | - | 4 | 4 | - | - | - | - | 4 | - | - | **4** | - | - |
| Fario (BG1079) | f | 5 | 21.11.23 | 14 | 37 | - | - | - | 14 | - | - | - | **14** | - | - |
| Farra (W0634) | u | 1 | - | 1 | 1 | - | - | - | 1 | - | - | - | **1** | - | - |
| Felix2 (BG0793) | m | 11 | 16.12.23 | 5 | 132 | 5 | - | - | - | - | - | - | **5** | - | - |
| Fortiche (W0630) | m | 1 | - | 3 | 3 | - | - | - | 3 | - | - | - | **3** | - | - |
| Fortuna (BG0843) | m | 10 | 24.07.23 | 8 | 55 | 8 | - | - | - | - | - | - | **8** | - | - |
| Fortunat (BG1068) | m | 5 | 07.08.23 | 18 | 41 | - | - | - | 18 | - | - | - | **18** | - | - |
| Fredueli (BG1001) | m | 7 | 31.12.23 | 1 | 37 | - | 1 | - | - | - | - | - | **1** | - | - |
| Fuego (BG1221) | f | 1 | - | 8 | 8 | - | - | - | 4 | 4 | - | - | **8** | - | - |
| Gaia (BG1212) | f | 1 | - | 4 | 4 | - | 4 | - | - | - | - | - | **4** | - | - |
| Gastein/Rauris2024 (W0594) | u | 1 | - | 5 | 5 | 5 | - | - | - | - | - | - | **5** | - | - |
| Gerlinde (BG0759) | f | 12 | 24.12.23 | 13 | 210 | - | - | - | 13 | - | - | - | **13** | - | - |
| Glocknerlady (BG0718) | f | 13 | 17.09.23 | 7 | 59 | 7 | - | - | - | - | - | - | **7** | - | - |
| Heiligenblut2024 (W0596) | u | 1 | - | 6 | 6 | 6 | - | - | - | - | - | - | **6** | - | - |
| Inge (BG0720) | f | 13 | 16.02.23 | 1 | 16 | - | 1 | - | - | - | - | - | **1** | - | - |
| Italia 150 (BG0660) | m | 14 | 27.12.23 | 24 | 138 | - | - | - | - | 24 | - | - | **24** | - | - |
| Jackpot (BG1175) | m | 2 | 29.11.23 | 37 | 39 | - | - | - | 36 | 1 | - | - | **37** | - | - |
| Jo (BG0169) | f | 33 | 06.08.22 | 2 | 237 | - | - | - | - | 2 | - | - | **2** | - | - |
| Johannes (BG0964) | m | 8 | 09.02.20 | 1 | 20 | - | 1 | - | - | - | - | - | **1** | - | - |
| Layrou (BG0761) | m | 12 | 30.12.23 | 30 | 379 | - | - | - | 30 | - | - | - | **30** | - | - |

[...]

*Table 11. Overview of the second part of 2'693 observations from 7 different countries reported in the IBM-database for the year 2024. The older a bird is and the more often it has been observed, the darker it is high-lighted in green. The longer a bird has not been observed before 2024, the darker it is highlighted in red.*

| Bird | Sex | Age (cy) | Observed | | | AUT | CHE | DEU | FRA | ITA | LIE | NOR | Total | Ornitho | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | before period | in period | total | | | | | | | | | .ch | .de |
| Le Croë (BG1169) | m | 2 | 26.12.23 | 11 | 15 | - | - | - | 10 | 1 | - | - | **11** | - | - |
| Léoux (BG0950) | f | 8 | 24.12.23 | 48 | 95 | - | - | - | - | 48 | - | - | **48** | - | - |
| Mallnitz2024 (W0603) | u | 1 | - | 2 | 2 | 2 | - | - | - | - | - | - | **2** | - | - |
| Meravilha (BG1201) | f | 1 | - | 13 | 13 | - | - | - | 13 | - | - | - | **13** | - | - |
| Mistral (BG1022) | m | 6 | 18.12.23 | 2 | 123 | - | - | - | 2 | - | - | - | **2** | - | - |
| Natura (BG0464) | f | 20 | 08.10.22 | 1 | 13 | 1 | - | - | - | - | - | - | **1** | - | - |
| Nepomuk (BG1178) | m | 2 | 06.12.23 | 23 | 28 | 16 | - | 2 | - | 5 | - | - | **23** | - | - |
| Noel-Leya (BG0797) | m | 11 | 13.06.23 | 3 | 18 | - | 3 | - | - | - | - | - | **3** | - | - |
| Novo (BG1098) | m | 4 | 26.12.23 | 1 | 76 | - | - | - | 1 | - | - | - | **1** | - | - |
| Obwaldera (BG1187) | m | 2 | 20.11.23 | 2 | 4 | - | 1 | - | - | 1 | - | - | **2** | - | - |
| Oeil Rouge (BG1198) | m | 1 | - | 49 | 49 | - | - | - | 49 | - | - | - | **49** | - | - |
| Ophrys (BG1078) | f | 5 | 06.12.23 | 7 | 60 | - | - | - | 7 | - | - | - | **7** | - | - |
| Paco Mauro (W0605) | u | 1 | - | 6 | 6 | - | - | - | - | 6 | - | - | **6** | - | - |
| Pamela (BG1031) | f | 6 | 12.12.23 | 8 | 94 | - | - | - | 8 | - | - | - | **8** | - | - |
| Paradiso (BG1213) | m | 1 | - | 6 | 6 | - | 6 | - | - | - | - | - | **6** | - | - |
| Peyre (BG1116) | m | 4 | 25.08.23 | 2 | 12 | - | - | - | 2 | - | - | - | **2** | - | - |
| Pinzgarus (BG0558) | m | 17 | 17.09.23 | 5 | 125 | 5 | - | - | - | - | - | - | **5** | - | - |
| Piuma (BG1239) | f | 1 | - | 4 | 4 | - | - | - | 4 | - | - | - | **4** | - | - |
| Prazon-sixt-fer-a-cheval (W0346) | u | 5 | 27.12.23 | 3 | 9 | - | 3 | - | - | - | - | - | **3** | - | - |
| Pyrenees (BG1094) | f | 4 | 27.12.23 | 5 | 19 | - | - | - | 5 | - | - | - | **5** | - | - |
| Recka (BG1147) | f | 3 | 03.12.23 | 30 | 62 | 30 | - | - | - | - | - | - | **30** | - | - |
| Rei del Causse (BG1128) | m | 3 | 16.12.23 | 8 | 35 | - | - | - | 8 | - | - | - | **8** | - | - |
| Ricky-Rico-Livigno (W0466) | m | 3 | 12.12.23 | 1 | 2 | - | - | - | - | 1 | - | - | **1** | - | - |
| Riglos (BG1138) | m | 3 | 19.12.23 | 18 | 74 | - | - | - | 18 | - | - | - | **18** | - | - |
| Roman (BG0854) | m | 10 | 30.12.23 | 19 | 240 | - | - | - | - | 19 | - | - | **19** | - | - |
| Sargas (BG1161) | m | 2 | 30.12.23 | 5 | 16 | - | - | - | 4 | 1 | - | - | **5** | - | - |
| Serapias (BG1164) | f | 2 | 29.11.23 | 14 | 20 | - | - | - | 14 | - | - | - | **14** | - | - |
| Severino-Zebru (W0372) | m | 4 | 04.09.21 | 2 | 3 | - | - | - | - | 2 | - | - | **2** | - | - |
| Sisi (BG1171) | f | 2 | 29.11.23 | 12 | 16 | 10 | 2 | - | - | - | - | - | **12** | - | - |
| Sixt Buet (W0285) | f | 6 | 12.07.20 | 1 | 3 | - | - | - | 1 | - | - | - | **1** | - | - |
| Stephan (BG0616) | m | 15 | 01.04.23 | 5 | 78 | - | - | - | 5 | - | - | - | **5** | - | - |
| Sulana (BG1144) | m | 3 | 04.04.23 | 4 | 14 | - | - | - | 4 | - | - | - | **4** | - | - |
| Sunny (W0397) | m | 4 | 23.11.23 | 3 | 5 | - | 1 | - | 2 | - | - | - | **3** | - | - |
| Tarn (BG1238) | f | 1 | - | 5 | 5 | - | - | - | 5 | - | - | - | **5** | - | - |
| Terre (BG1202) | f | 1 | - | 6 | 6 | - | - | - | 6 | - | - | - | **6** | - | - |
| Tornade (BG1207) | f | 1 | - | 4 | 4 | - | - | - | 4 | - | - | - | **4** | - | - |
| Tourmente (BG1242) | f | 1 | - | 12 | 12 | - | - | - | 12 | - | - | - | **12** | - | - |
| Trenta (W0512) | f | 2 | - | 5 | 5 | - | - | - | 2 | 3 | - | - | **5** | - | - |
| Valgaudemar (W0618) | u | 1 | - | 1 | 1 | - | - | - | 1 | - | - | - | **1** | - | - |
| Vidoc (W0356) | f | 5 | 30.12.23 | 2 | 4 | - | 2 | - | - | - | - | - | **2** | - | - |
| Vinzenz (BG1227) | m | 1 | - | 4 | 4 | 3 | - | 1 | - | - | - | - | **4** | - | - |
| Wiggerl (BG1240) | m | 1 | - | 6 | 6 | 5 | - | 1 | - | - | - | - | **6** | - | - |
| unknown | | | | | | 244 | 226 | 18 | 323 | 1086 | - | 20 | **1917** | 4666 | 213 |
| **Total observed in 2024** | | | | | | **384** | **257** | **26** | **778** | **1227** | **1** | **20** | **2693** | | |

### 7.2.1 Ornitho data

#### 7.2.1.1 Ornitho.ch

Another 4'666 Bearded Vulture observations have been reported from *ornitho.ch.* Even though these observations were not validated by the IBM-partner network, these observations deliver information about Bearded Vulture hotspots and future focal areas (Figure 7).

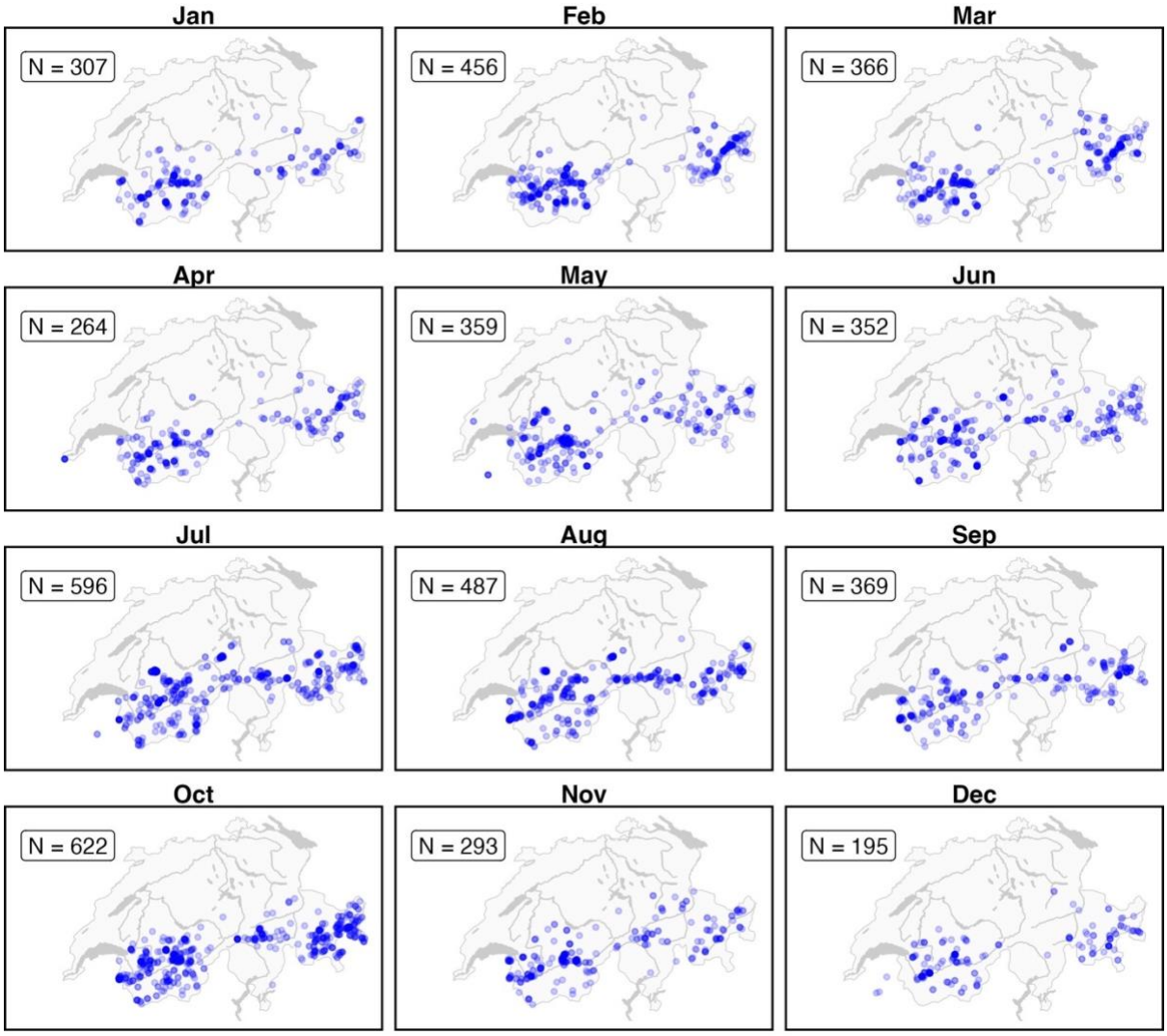



*Figure 7. All observations classified as Bearded Vulture observations on Ornitho.ch in 2024. The points are shown with 20% coverage, so five overlapping observations appear in dark blue.*

#### 7.2.1.2 Ornitho.de

213 Bearded Vulture observations have been reported from *ornitho.de.* Even though these observations were not validated by the IBM-partner network, these observations deliver information about Bearded Vulture hotspots and future focal areas (Figure 8).

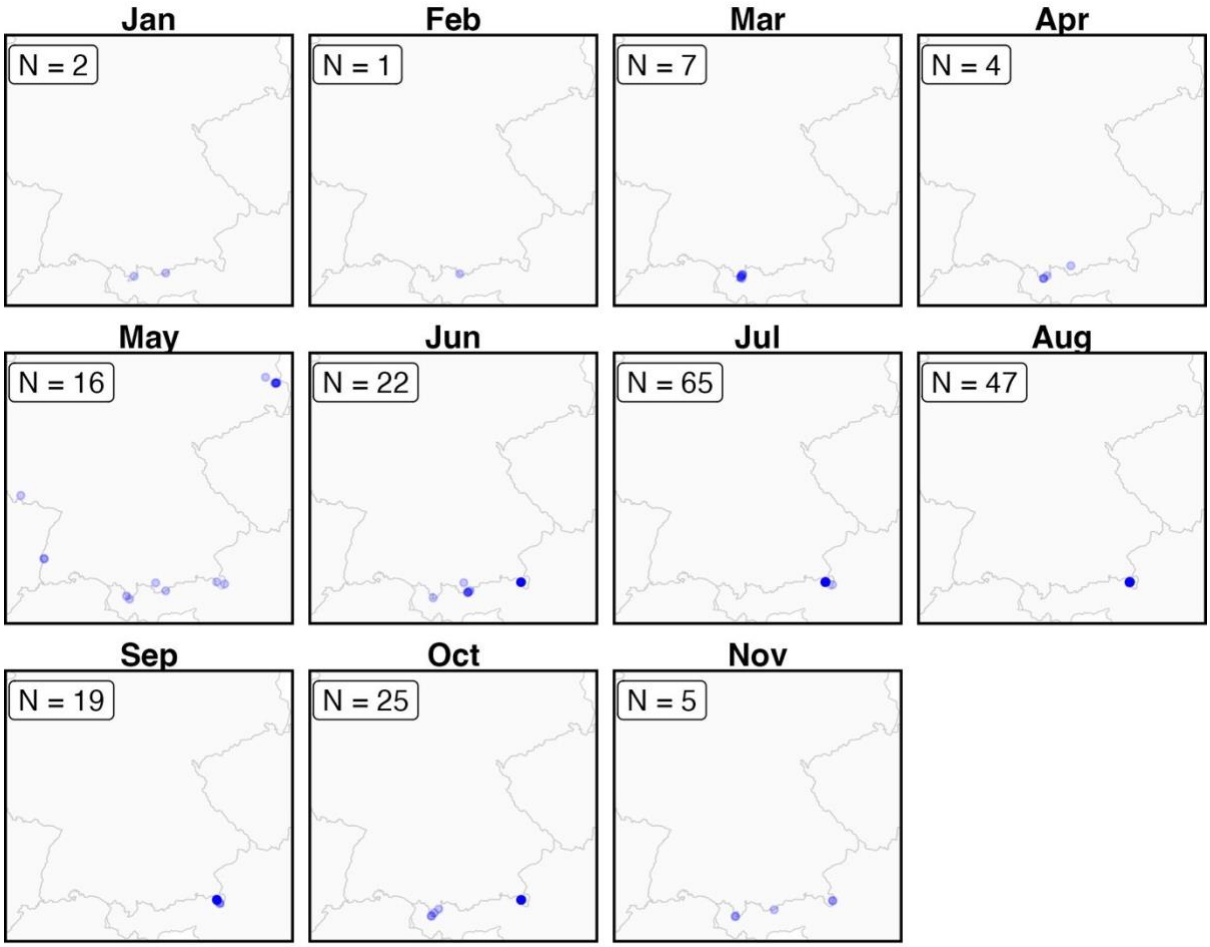



*Figure 8. All observations classified as Bearded Vulture observations on Ornitho.de in 2024. The points are shown with 20% coverage, so five overlapping observations appear in dark blue*

## 7.3 Individual identification

Thanks to the sophisticated marking system of the IBM, it was possible to identify 226 Bearded Vultures in 2024 (Table 12 - Table 17). Data from observations, the reproduction monitoring, telemetry as well as the IOD were used to gain valuable information about Bearded Vultures on the individual level. Genetic monitoring data is used to identify breeding birds, no matter if marked with rings or not and often additional features like moulting pattern allow to identify the birds during the breeding season.

This information allows to draw conclusions about the life history of individuals, which forms the basis for survival analyses in order to better understand and manage the reintroduction process of this endangered species. Furthermore, such life history data is essential for population modelling and predictions about the development of the Bearded Vulture population.

*Table 12. List of all birds that have been identified in 2024 with "origin" in the eastern Alpine range. Wild-hatched birds are marked with a prefixed "W" or "GT" in the BirdID. "Identification" describes the data basis that was used for their record: r = reproduction, i = IOD, t = telemetry, o = observation. Sorted by their region of origin (territory or release site). * = territory of hatch from juvenile birds. Individuals written in grey died in 2024, see 9.1.*

| Bird | BirdID | Sex | Hatch | Origin (release site, territory) / country | Territory | | Identification |
|---|---|---|---|---|---|---|---|
| **Eastern Alps** | | | | | | | **33** |
| Gastein/Rauris2024 | W0594 | u | 2024 | Gastein/Rauris | | Gastein/Rauris (AUT)* | r,o |
| Heiligenblut2024 | W0596 | u | 2024 | Heiligenblut | | Heiligenblut (AUT)* | r,o,i |
| Cravallo | W0156 | m | 2015 | Katschberg | | Tinizong (CHE) | r |
| Mallnitz2024 | W0603 | u | 2024 | Mallnitz | | Mallnitz (AUT)* | r,o |
| Ötztal2024 | W0622 | u | 2024 | Ötztal | | Ötztal (AUT)* | r,i |
| Felix2 | BG0793 | m | 2014 | NP Hohe Tauern, Debantal | | Mallnitz (AUT) | r,o,i |
| Kilian | BG0790 | m | 2014 | NP Hohe Tauern, Debantal | | Reschen-Resia (ITA) | r,i |
| Fortuna | BG0843 | m | 2015 | NP Hohe Tauern, Dorfertal | | Heiligenblut (AUT) | r,o,i,t |
| Glocknerlady | BG0718 | f | 2012 | NP Hohe Tauern, Fleißtal | | Gschlöß (AUT) | r,o |
| Inge | BG0720 | f | 2012 | NP Hohe Tauern, Fleißtal | | Tinizong (CHE) | r,o |
| Ambo | BG0392 | f | 2002 | NP Hohe Tauern, Gastein | AUT | Heiligenblut (AUT) | r,o |
| Smaragd | BG0675 | m | 2011 | NP Hohe Tauern, Habachtal | | Zermatt (CHE) | r,i |
| Hubertus 2 | BG0446 | m | 2004 | NP Hohe Tauern, Kals | | Katschberg (AUT) | r |
| Romaris | BG0528 | f | 2007 | NP Hohe Tauern, Kals | | Katschberg (AUT) | r |
| Joker | BG0420 | f | 2003 | NP Hohe Tauern, Mallnitz | | Prägraten (AUT) | r |
| Caeli | BG0998 | m | 2018 | NP Hohe Tauern, Mallnitz | | Passeier (ITA) | r |
| El Dorado | BG0372 | f | 2001 | NP Hohe Tauern, Matrei | | Prägraten (AUT) | r |
| Alexa | BG0100 | f | 1988 | NP Hohe Tauern, Rauris | | Gastein/Rauris (AUT) | r,o,i |
| Andreas Hofer | BG0260 | m | 1996 | NP Hohe Tauern, Rauris | | Gastein/Rauris (AUT) | r,o,i |
| Pinzgarus | BG0558 | m | 2008 | NP Hohe Tauern, Rauris | | Gschlöß (AUT) | r,o |
| Charlie | BG0910 | f | 2016 | NP Hohe Tauern, Untersulzb. | | Mallnitz (AUT) | r,o,i |
| Bavaria | BG1112 | f | 2021 | Berchtesgaden, Halsgrube | | | o,t |
| Dagmar | BG1145 | f | 2022 | Berchtesgaden, Halsgrube | | | o,t |
| Recka | BG1147 | f | 2022 | Berchtesgaden, Halsgrube | | | o,t |
| Nepomuk | BG1178 | m | 2023 | Berchtesgaden, Halsgrube | GER | | o,i,t |
| Sisi | BG1171 | f | 2023 | Berchtesgaden, Halsgrube | | | o,i,t |
| Vinzenz | BG1227 | m | 2024 | Berchtesgaden, Halsgrube | | | o,i,t |
| Wiggerl | BG1240 | m | 2024 | Berchtesgaden, Halsgrube | | | o,i,t |
| Retia | BG0357 | f | 2000 | NP Stilfserjoch, Martell | | Buffalora (CHE) | r |
| Martell | BG0395 | f | 2002 | NP Stilfserjoch, Martell | | Bergün (CHE) | r |
| Stift | BG0393 | f | 2002 | NP Stilfserjoch, Martell | ITA | Valle del Braulio (ITA) | r,i |
| Temperatio | BG0495 | f | 2006 | NP Stilfserjoch, Martell | | Val Martello (ITA) | r,i |
| Haristraufu | BG0556 | m | 2008 | NP Stilfserjoch, Martell | | Planeil (ITA) | r |

*Table 13. List of all birds that have been identified in 2024 with "origin" in the central Alpine range (AUT and CHE). Wild-hatched birds are marked with a prefixed "W" or "GT" in the BirdID. "Identification" describes the data basis that was used for their record: r = reproduction, i = IOD, t = telemetry, o = observation. Sorted by their region of origin (territory or release site). * = territory of hatch from juvenile birds. Individuals written in grey died in 2024, see 9.1.*

| Bird | BirdID | Sex | Hatch | Origin (release site, territory) / country | | Territory | Identification |
|---|---|---|---|---|---|---|---|
| **Central Alps** | | | | | | | **45** |
| Lechtal2024 | W0620 | u | 2024 | Lechtal | AUT | Lechtal (AUT)* | r |
| Pitztal2024 | W0623 | u | 2024 | Pitztal | AUT | Pitztal (AUT)* | r |
| Humboldt-Albula | W0079 | f | 2010 | Albula | | Ötztal (AUT) | r,i |
| Albula2024 | W0580 | u | 2024 | Albula | | Albula (CHE)* | r |
| Avers2024 | W0610 | u | 2024 | Avers | | Avers (CHE)* | r |
| Bergün2016 | W0187 | f | 2016 | Bergün | | Müstair (CHE) | r |
| Bergün2024 | W0600 | u | 2024 | Bergün | | Bergün (CHE)* | r |
| Foraz2024 | W0597 | u | 2024 | Foraz | | Foraz (CHE)* | r |
| Ecureuil-Maloja | W0184 | m | 2016 | Maloja | | Sondrio (ITA) | r,i |
| Maloja2024 | W0616 | f | 2024 | Maloja | | Maloja (CHE)* | r |
| Heinz-Serraglio | W0045 | m | 2007 | Ofenpass | | Zebru (ITA) | r,i |
| Jenny-Ofenpass2024 | W0607 | u | 2024 | Ofenpass | | Ofenpass (CHE)* | r,i |
| OvaSpin2024 | W0584 | u | 2024 | Ova Spin | | Ova Spin (CHE)* | r |
| Pontresina2024 | W0589 | u | 2024 | Pontresina | | Pontresina (CHE)* | r |
| Poschiavo2024 | W0586 | u | 2024 | Poschiavo | | Poschiavo (CHE)* | r |
| Sinestra2024 | W0625 | u | 2024 | Sinestra | | Sinestra (CHE)* | r |
| Spöl2024 | W0576 | u | 2024 | Spöl | | Spöl (CHE)* | r |
| Silvan-Tantermozza | W0095 | f | 2011 | Tantermozza | | Saas (CHE) | r,i |
| Pitschen-Tantermozza | W0147 | u | 2014 | Tantermozza | | Foraz (CHE) | r |
| Tantermozza2024 | W0598 | u | 2024 | Tantermozza | | Tantermozza (CHE)* | r |
| Trupchun2024 | W0604 | f | 2024 | Trupchun | | Trupchun (CHE)* | r |
| Ingenius | BG0621 | m | 2010 | Calfeisen, Vaettis | | Buffalora (CHE) | r |
| Madagaskar | BG0665 | m | 2011 | Calfeisen, Vaettis | CHE | Lechtal (AUT) | r,i |
| Aschka | BG0749 | f | 2013 | Calfeisen, Vaettis | CHE | Bourg-Saint-Maurice-2 (FRA) | r |
| Noel-Leya | BG0797 | m | 2014 | Calfeisen, Vaettis | | | o,i |
| Schils | BG0802 | m | 2014 | Calfeisen, Vaettis | | Bourg-Saint-Maurice-2 (FRA) | r,t |
| Ewolina | BG0838 | f | 2015 | Melchsee-Frutt | | | t |
| Cierzo | BG0899 | m | 2016 | Melchsee-Frutt | | Val d'Hérens (CHE) | r,o,i,t |
| Johannes | BG0964 | m | 2017 | Melchsee-Frutt | | | o,i,t |
| Finja | BG1003 | f | 2018 | Melchsee-Frutt | | | t |
| Fredueli | BG1001 | m | 2018 | Melchsee-Frutt | | | o,t |
| Fortunat | BG1068 | m | 2020 | Melchsee-Frutt | | | o,i,t |
| Luzerna | BG1071 | f | 2020 | Melchsee-Frutt | | | i,t |
| BelArosa | BG1119 | m | 2021 | Melchsee-Frutt | | | o,t |
| Donna Elvira | BG1117 | f | 2021 | Melchsee-Frutt | | | i,t |
| Obwaldera | BG1185 | m | 2023 | Melchsee-Frutt | | | o,t |
| Aurora | BG1234 | f | 2024 | Melchsee-Frutt | | | i,t |
| Gaia | BG1212 | f | 2024 | Melchsee-Frutt | | | o,i,t |
| Paradiso | BG1213 | m | 2024 | Melchsee-Frutt | | | o,i,t |
| Moische | BG0146 | f | 1991 | NP Engadin, Zernez | | Livigno (ITA) | r,i |
| Jo | BG0169 | f | 1992 | NP Engadin, Zernez | | Ortler (ITA) | r,o,i |
| Cic | BG0186 | m | 1993 | NP Engadin, Zernez | | Livigno (ITA) | r,i |
| Felice | BG0375 | f | 2001 | NP Engadin, Zernez | | Zebru (ITA) | r,i |
| Natura | BG0464 | f | 2005 | NP Engadin, Zernez | | Lechtal (AUT) | r,o,i |
| Samuel | BG0526 | m | 2007 | NP Engadin, Zernez | | Sinestra (CHE) | r |

[...]

*Table 14. List of all birds that have been identified in 2024 with "origin" in the central Alpine range (ITA). Wild-hatched birds are marked with a prefixed "W" or "GT" in the BirdID. "Identification" describes the data basis that was used for their record: r = reproduction, i = IOD, t = telemetry, o = observation. Sorted by their region of origin (territory or release site). * = territory of hatch from juvenile birds. Individuals written in grey died in 2024, see 9.1.*

| Bird | BirdID | Sex | Hatch | Origin (release site, territory) / country | | Territory | Identification |
|---|---|---|---|---|---|---|---|
| **Central Alps** | | | | | | | **21** |
| Foscagno2024 | W0646 | u | 2024 | Foscagno | | Foscagno (ITA)* | r,i |
| Livigno | W0008 | m | 2000 | Livigno | | Ofenpass (CHE) | r,i |
| Moische-Livigno | W0011 | f | 2002 | Livigno | | Sinestra (CHE) | r |
| Urbano | W0122 | m | 2013 | Livigno | | Trupchun (CHE) | r |
| Astrid-Livigno | W0235 | m | 2017 | Livigno | | Margna (CHE) | r |
| Ricky-Rico-Livigno | W0466 | m | 2022 | Livigno | | | o |
| Fopel | W0595 | u | 2024 | Livigno | | Livigno (ITA)* | r,i |
| GT0048 | - | f | - | Livigno | | Tantermozza (CHE) | r |
| Martina2024 | W0579 | u | 2024 | Martina | | Martina (CHE)* | r |
| Sielva | W0629 | u | 2024 | Ortler | | Ortler (ITA)* | r,i |
| Marco-Rabbi2024 | W0626 | u | 2024 | Rabbi | ITA | Rabbi (ITA)* | r,i |
| Reschen-Resia2024 | W0614 | u | 2024 | Reschen-Resia | | Reschen-Resia (ITA)* | r |
| Schnals2024 | W0583 | u | 2024 | Schnals | | Schnals (ITA)* | r |
| Tiziana | W0647 | u | 2024 | Sondrio | | Sondrio (ITA)* | r |
| Peder | W0628 | u | 2024 | Val Martello | | Val Martello (ITA)* | r,i |
| Stelvio | W0002 | u | 1998 | Valle del Braulio | | Termignon (FRA) | r,i |
| Diana-Stelvio | W0007 | f | 2000 | Valle del Braulio | | Albula (CHE) | r |
| Zebru | W0012 | m | 2002 | Zebru | | Tantermozza (CHE) | r |
| Rimani | W0093 | f | 2011 | Zebru | | Chambeyron-Ubayette (FRA) | r,i |
| Paolino-Zebru | W0204 | m | 2016 | Zebru | | Ötztal (AUT) | r,i |
| Severino-Zebru | W0372 | m | 2021 | Zebru | | | o,t |

*Table 15. List of all birds that have been identified in 2024 with "origin" in the north-western Alpine range. Wild-hatched birds are marked with a prefixed "W" or "GT" in the BirdID. "Identification" describes the data basis that was used for their record: r = reproduction, i = IOD, t = telemetry, o = observation. Sorted by their region of origin (territory or release site). * = territory of hatch from juvenile birds. Individuals written in grey died in 2024, see 9.1.*

| Bird | BirdID | Sex | Hatch | Origin (release site, territory) / country | | Territory | Identification |
|---|---|---|---|---|---|---|---|
| **North-western Alps** | | | | | | | **47** |
| Mison | W0230 | f | 2017 | Bagnes | | Veneon1 (FRA) | r,t |
| Deborence_Vér. 2024 | W0644 | u | 2024 | Derborence_Vérouet | | Derborence_Vérouet (CHE)* | r |
| Irène-Derborence d. | W0160 | f | 2015 | Derborence_down | | Pierre Fendue (FRA) | r |
| Derborence_d.2024 | W0570 | u | 2024 | Derborence_down | | Derborence_down (CHE)* | r |
| Gregoria-Jordan | W0367 | m | 2020 | Kandertal | | | t |
| Kandertal2024 | W0627 | u | 2024 | Kandertal | | Kandertal (CHE)* | r |
| Leukerbad2024 | W0599 | u | 2024 | Leukerbad | CHE | Leukerbad (CHE)* | r |
| Saas2024 | W0573 | u | 2024 | Saas | | Saas (CHE)* | r |
| Sefinental2024 | W0637 | u | 2024 | Sefinental | | Sefinental (CHE)* | r |
| Sionne2024 | W0578 | u | 2024 | Sionne | | Sionne (CHE)* | r |
| Stalden2024 | W0569 | u | 2024 | Stalden VS | | Stalden VS (CHE)* | r |
| ValFerret2024 | W0602 | u | 2024 | Val Ferret | | Val Ferret (CHE)* | r |
| Zermatt2024 | W0624 | u | 2024 | Zermatt | | Zermatt (CHE)* | r |
| Farra | W0634 | u | 2024 | Andagne | | Andagne (FRA)* | r,o,t |
| Neige | W0198 | m | 2016 | Aravis | | Pierre Fendue (FRA) | r |
| Gypsy | W0209 | m | 2017 | Aravis | | Ardoisieres (FRA) | r,i,t |
| Elfie | W0437 | f | 2022 | Aravis | | | o,i,t |
| Luz | W0577 | u | 2024 | Aravis | | Aravis (FRA)* | r |
| Timo | W0615 | f | 2024 | Ardoisieres | | Ardoisieres (FRA)* | r,i,t |
| Gemapi | W0196 | f | 2016 | Bargy | | | t |
| Lapie | W0251 | m | 2018 | Bargy | | Aravis Sud74 (FRA) | r,i,t |
| Pierro | W0301 | m | 2019 | Bargy | | | t |
| Vidoc | W0356 | f | 2020 | Bargy | | | o,i,t |
| Sunny | W0397 | m | 2021 | Bargy | | | o,i,t |
| Genep | W0609 | f | 2024 | Bargy | | Bargy (FRA)* | r,i,t |
| Asters | W0612 | u | 2024 | Bargy BIS | | Bargy BIS (FRA)* | r |
| BS-Maurice2024 | W0636 | u | 2024 | Bourg-Saint-Maurice | | Bourg-Saint-Maurice (FRA)* | r |
| Erasmus | W0549 | f | 2023 | Bourg-Saint-Maurice-2 | FRA | | t |
| Fortiche | W0630 | m | 2024 | Bourg-Saint-Maurice-2 | | Bourg-Saint-Maurice-2 (FRA)* | r,o,i,t |
| Ardoise | W0632 | u | 2024 | Emcombres | | Emcombres (FRA)* | r |
| Altitude | W0313 | f | 2019 | Peisey-Nancroix | | | o,i,t |
| Dome | W0478 | f | 2022 | Peisey-Nancroix | | | t |
| Esprit | W0545 | f | 2023 | Peisey-Nancroix | | | o,t |
| Balmat | W0141 | f | 2014 | Sixt Fiz | | Sondrio (ITA) | r,i |
| Ginko | W0169 | f | 2015 | Sixt Fiz | | Niedergesteln (CHE) | r,i |
| Sixt Buet | W0285 | f | 2019 | Sixt Fiz | | | o,i,t |
| Prazon-sixt-fer-a-cheval | W0346 | u | 2020 | Sixt Fiz | | | o,t |
| Termignon2024 | W0582 | u | 2024 | Termignon | | Termignon (FRA)* | r,i |
| Franchet | W0631 | m | 2024 | Val dIsère | | Val dIsère (FRA)* | r,i,t |
| Republic 3 | BG0166 | m | 1992 | Haute-Savoie, Bargy | | Val dIsère (FRA) | r |
| Pablo | BG0359 | m | 2000 | Haute-Savoie, Bargy | | Derborence_Vérouet (CHE) | r |
| Sallanches | BG0460 | f | 2005 | Haute-Savoie, Doran | | Val di Rhemes (ITA) | r |
| Chamoussiere2024 | W0593 | u | 2024 | Chamoussière | | Chamoussière (ITA)* | r |
| GranSanBernado2023 | W0645 | u | 2024 | Gran San Bernardo | | Gran San Bernardo (ITA)* | r |
| Aries | W0608 | u | 2024 | Usseglio | ITA | Usseglio (ITA)* | r,o,i |
| Rhemes2024 | W0611 | u | 2024 | Val di Rhemes | | Val di Rhemes (ITA)* | r |
| Valnontey2024 | W0574 | u | 2024 | Valnontey | | Valnontey (ITA)* | r |

*Table 16. List of all birds that have been identified in 2024 with "origin" in the south-western Alpine range. Wild-hatched birds are marked with a prefixed "W" or "GT" in the BirdID. "Identification" describes the data basis that was used for their record: r = reproduction, i = IOD, t = telemetry, o = observation. Sorted by their region of origin (territory or release site). * = territory of hatch from juvenile birds. Individuals written in grey died in 2024, see 9.1.*

| **South-western Alps** | | | | | | **44** |
|---|---|---|---|---|---|---|
| Croze | W0592 | u | 2024 | Archiane | Archiane (FRA)* | r,o |
| Trenta | W0512 | f | 2023 | Bonette | | o,i,t |
| Alpi | W0581 | f | 2024 | Bonette | Bonette (FRA)* | r,i,t |
| Geny | W0617 | f | 2024 | Chambeyron-Ubayette | Chambeyron-Ubayette (FRA)* | r,i,t |
| Emparis | W0284 | f | 2019 | Malaval | | t |
| Malaval | W0621 | u | 2024 | Malaval | Malaval (FRA)* | r |
| Cassos | W0104 | u | 2012 | Source de lUbaye | Chambeyron-Ubayette (FRA) | r,i |
| Roche Grande | W0588 | u | 2024 | Val dEntraunes | Val dEntraunes (FRA)* | r,i |
| Valgaudemar | W0618 | u | 2024 | Valgaudemar | Valgaudemar (FRA)* | r,o |
| Veneon | W0571 | u | 2024 | Veneon1 | Veneon1 (FRA)* | r |
| Girun | BG0904 | f | 2016 | Baronnies, Léoux Valley | Aravis Sud74 (FRA) | r,i,t |
| Léoux | BG0950 | f | 2017 | Baronnies, Léoux Valley | MVG (ITA) | r,o,t |
| Simay | BG0983 | m | 2018 | Baronnies, Léoux Valley | | i,t |
| Pamela | BG1031 | f | 2019 | Baronnies, Léoux Valley | Archiane (FRA) | r,o,i,t |
| Riglos | BG1138 | m | 2022 | Baronnies, Léoux Valley | | o,t |
| Baronnies | BG1163 | f | 2023 | Baronnies, Léoux Valley | | o,i,t |
| Dromie | BG1162 | m | 2023 | Baronnies, Léoux Valley | | o,i,t |
| Meravilha | BG1201 | f | 2024 | Baronnies, Léoux Valley | | o,t |
| Oeil Rouge | BG1198 | m | 2024 | Baronnies, Léoux Valley | | o,t |
| Guillaumes | BG0411 | f | 2003 | PN du Mercantour, Vignols | Derborence_Vérouet (CHE) | r,t |
| Jausiers | BG0413 | f | 2003 | PN du Mercantour, Vignols | Val dIsère (FRA) | r |
| Fontvieille | BG0520 | f | 2007 | PN du Mercantour, Vignols | Valnontey (ITA) | r |
| Rocca | BG0516 | m | 2007 | PN du Mercantour, Vignols | Source de la Tinée (FRA) | r,i |
| Costa | BG0757 | f | 2013 | PN du Mercantour, Vignols | Bramans (FRA) | r |
| Tenao | BG0755 | m | 2013 | PN du Mercantour, Vignols | Val dEntraunes (FRA) | r,i |
| Stephan | BG0616 | m | 2010 | PNR Vercors, Trechenu-Crey. | Ambane (FRA) | r,o,i |
| Bellemotte | BG0708 | f | 2012 | PNR Vercors, Trechenu-Crey. | Bonette (FRA) | r |
| Gerlinde | BG0759 | f | 2013 | PNR Vercors, Trechenu-Crey. | Ambane (FRA) | r,o,i |
| Elvio | BG1026 | m | 2019 | PNR Vercors, Trechenu-Crey. | Molines Chp (FRA) | r,o,i,t |
| Mistral | BG1022 | m | 2019 | PNR Vercors, Trechenu-Crey. | | o,t |
| Kobalann | BG1063 | f | 2020 | PNR Vercors, Trechenu-Crey. | | i,t |
| Novo | BG1098 | m | 2021 | PNR Vercors, Trechenu-Crey. | Molines Chp (FRA) | r,o,t |
| Jackpot | BG1175 | m | 2023 | PNR Vercors, Trechenu-Crey. | | o,i,t |
| Le Croë | BG1169 | m | 2023 | PNR Vercors, Trechenu-Crey. | | o,t |
| Boréale | BG1229 | f | 2024 | PNR Vercors, Trechenu-Crey. | | o,t |
| Fuego | BG1221 | f | 2024 | PNR Vercors, Trechenu-Crey. | | o,t |
| Paco Mauro | W0605 | u | 2024 | Maira | Maira (ITA)* | r,o |
| Sereno | BG0348 | m | 2000 | PN Alpi Marittime, Argentera | Source de lUbaye (FRA) | r,i |
| Girasole | BG0549 | f | 2008 | PN Alpi Marittime, Argentera | Source de la Tinée (FRA) | r,i |
| Nonno Bob | BG0548 | m | 2008 | PN Alpi Marittime, Argentera | Andagne (FRA) | r |
| Italia 150 | BG0660 | m | 2011 | PN Alpi Marittime, Argentera | Usseglio (ITA) | r,o,i |
| Junior Ranger | BG0702 | f | 2012 | PN Alpi Marittime, Argentera | Andagne (FRA) | r,i |
| Roman | BG0854 | m | 2015 | PN Alpi Marittime, Argentera | Maira (ITA) | r,o,i,t |

*Table 17. List of all birds that have been identified in 2024 with "origin" in the Massif Central (FRA), the French Pyrenees, in Maestrazgo (ESP) and on Corsica (FRA). Wild-hatched birds are marked with a prefixed "W" or "GT" in the BirdID. "Identification" describes the data basis that was used for their record: r = reproduction, i = IOD, t = telemetry, o = observation. Sorted by their region of origin (territory or release site). * = territory of hatch from juvenile birds. Individuals written in grey died in 2024, see 9.1.*

| Bird | BirdID | Sex | Hatch | Origin (release site, territory) / country | | Territory | Identification |
|---|---|---|---|---|---|---|---|
| **Massif Central** | | | | | | | **18** |
| Layrou | BG0761 | m | 2013 | Grands Causses, Trévezel | | Jonte amont (FRA) | r,o,i,t |
| Calandreto | BG0948 | m | 2017 | Grands Causses, Trévezel | | Dargilan (FRA) | r,o,i |
| Fario | BG1079 | f | 2020 | Grands Causses, Trévezel | | | o,i,t |
| Ophrys | BG1078 | f | 2020 | Grands Causses, Trévezel | | | o,i,t |
| Peyre | BG1116 | m | 2021 | Grands Causses, Trévezel | | | o,i,t |
| Pradines | BG1122 | f | 2021 | Grands Causses, Trévezel | | | t |
| Pyrenees | BG1094 | f | 2021 | Grands Causses, Trévezel | | | o,t |
| Rei del Causse | BG1128 | m | 2022 | Grands Causses, Trévezel | | | o,t |
| Sargas | BG1161 | m | 2023 | Grands Causses, Trévezel | FRA | | o,i,t |
| Serapias | BG1164 | f | 2023 | Grands Causses, Trévezel | | | o,t |
| Basalte | BG0716 | m | 2012 | Grands Causses,Frépestel | | Malaval (FRA) | r,o |
| Adonis | BG0794 | m | 2014 | Grands Causses,Frépestel | | Jonte amont (FRA) | r,o,i |
| Cévennes | BG1032 | m | 2019 | Grands Causses,Frépestel | | | o,t |
| Aven | BG1067 | f | 2020 | Grands Causses,Frépestel | | Dargilan (FRA) | r,o,i,t |
| Tarn | BG1238 | f | 2024 | Grands Causses,Frépestel | | | o,t |
| Terre | BG1202 | f | 2024 | Grands Causses,Frépestel | | | o,i,t |
| Tornade | BG1207 | f | 2024 | Grands Causses,Frépestel | | | o,i,t |
| Tourmente | BG1242 | f | 2024 | Grands Causses,Frépestel | | | o,t |
| **Maestrazgo** | | | | | | | **12** |
| Alos | BG0992 | m | 2018 | Tinença de Benifassà | | | t |
| Amic | BG0995 | m | 2018 | Tinença de Benifassà | | | t |
| Bassi | BG1033 | m | 2019 | Tinença de Benifassà | | | i,t |
| Celest | BG1073 | f | 2020 | Tinença de Benifassà | | | t |
| Dalila | BG1109 | f | 2021 | Tinença de Benifassà | | | t |
| Dena | BG1104 | f | 2021 | Tinença de Benifassà | ESP | | t |
| Esperit | BG1135 | m | 2022 | Tinença de Benifassà | | | t |
| Farigola | BG1172 | f | 2023 | Tinença de Benifassà | | | t |
| Flora | BG1177 | f | 2023 | Tinença de Benifassà | | | t |
| Gea | BG1214 | f | 2024 | Tinença de Benifassà | | | t |
| Genista | BG1225 | f | 2024 | Tinença de Benifassà | | | i,t |
| Guaita | BG1215 | f | 2024 | Tinença de Benifassà | | | t |
| **Corsica** | | | | | | | **7** |
| Muntagnolu | BG0890 | m | 2016 | Corsica, Niolo Valley | | Evisa (FRA) | r,t |
| Ercu | BG0958 | m | 2017 | Corsica, Niolo Valley | | | o |
| Luna | BG0959 | f | 2017 | Corsica, Niolo Valley | | Evisa (FRA) | r |
| Cintu | BG1042 | m | 2019 | Corsica, Niolo Valley | FRA | | o,t |
| Sulana | BG1144 | m | 2022 | Corsica, Niolo Valley | | | o,t |
| Culomba | BG1233 | f | 2024 | Corsica, Ghisoni | | | o,t |
| Piuma | BG1239 | f | 2024 | Corsica, Ghisoni | | | o,t |

## 7.4 Population estimates based on IOD 2024

On October 12th, during this year's Focal Day, more than 1'400 observers participated in the 19th annual Bearded Vulture census under generally favourable weather conditions. While 26% of observation sites - mainly located on the southern side of the main Alpine ridge and in Spain - experienced poor weather, visibility was reported as good (36%) or moderate (39%) at most sites. Consequently, during the IOD period, a total of 1'162 Bearded Vulture sightings were recorded at 371 of the 858 monitored sites (43%).

In collaboration with 17 IBM partners and several associated organisations, synchronous observations were conducted at 789 sites on the Focal Day, with an additional 69 sites monitored during the extended IOD period. Local experts and monitoring personnel with extensive regional knowledge played a key role in estimating population size and identifying individual birds. By aggregating and analysing these observations across the monitoring region, the age class distribution of the observed population was derived and compared to demographic model predictions (Schaub et al., 2009) at the Alpine scale.

The Alpine Bearded Vulture population was estimated to range between 414 and 547 individuals, slightly below the modelled estimate of 506 individuals. The observed age class distribution closely aligned with model predictions, though subadult birds were slightly underrepresented - likely due to identification challenges in the field. The estimated distribution was as follows: 59% adults, 8% subadults, 15% immature, and 15% juveniles. These estimates were based on observation data from the Focal Day, adjusted to account for unobserved individuals such as territorial birds, fledglings, and GPS-tagged individuals (N = 91 during IOD 2024), among others.

In the Massif Central, the Bearded Vulture population was estimated at 15 to 19 individuals, while in the Aude region of the French Pyrenees approximately 5 to 6 individuals were estimated. Outside the Pyrenees and the Picos de Europa in Spain, estimated population sizes included around 7 individuals in the Maestrazgo region and between 34 and 47 in the remaining part of Spain. As in previous years, no Bearded Vultures were observed in Bulgaria, where the species has been considered extinct since 1972.

During this year's IOD, individual-based identification confirmed 97 Bearded Vultures in the Alps, 10 in the Massif Central, and 19 in Spain, with an additional 15 individuals (14 in the Alps and 1 in the Massif Central) identified with lower certainty. In addition, 91 individuals were tracked via GPS, and 36 of these 62 GPS-tagged Bearded Vultures known to be present in the Alpine region were visually confirmed by observers (58%). These individual-based data are of high value for understanding the species' life history and for refining demographic modelling. The availability of such internationally coordinated, individual-based information is unique and provides essential insights into survival rates and long-term population dynamics, thereby supporting progress in Bearded Vulture conservation.

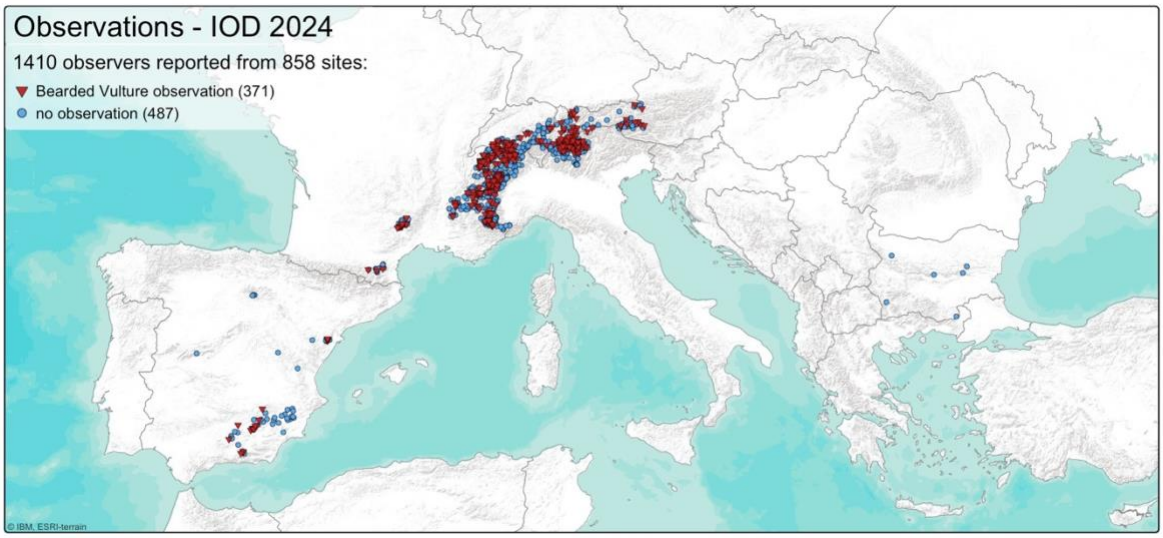



*Figure 9. Distribution of all 858 observation sites during the IOD 2024 in Europe. Red triangles depict those sites where Bearded Vultures have been observed at least once during the IOD period 12th – 20th of October 2024 (N=371) while no observations have been reported from sites marked with a blue dot (N=487).*

*The complete IOD 2024 report can be found online on [www.gyp-monitoring.com](http://www.gyp-monitoring.com)*

# 8 Markings

Individual based monitoring makes the International Bearded Vulture Monitoring unique among monitoring projects of this scale. By the end of 2024, more than 70'800 Bearded Vulture observations (Ornitho.ch, ornitho.de and telemetry data excluded) were stored in the IBM-database, ~30% of them from identified individuals. The marking of released and wild-hatched birds is of major importance to follow the life history and reveal the behavioural patterns of the individuals in order to understand the demography and track the development of the reintroduction process. Therefore, young Bearded Vultures are marked with rings (chapter 8.1), some feathers are bleached (chapter 8.2) as well as tagged with GPS-tags (chapter 8.3) before they are released into the wild or in the nest before fledging (Figure 14).

## 8.1 Rings

Due to the limited number of two-digit alphanumeric codes and the rare possibilities to actually decipher a ring code in the field, the IBM-steering-committee has decided to use coloured aluminium rings with a two-digit code for ringing starting in 2021. The colours are intended to facilitate identification without the need to decipher the code. In addition, the combination of numbers and colours provides more options for individual rings, which will allow this system to continue for the next years.

This adaptation has further improved the existing marking system, because apart from the colours, the rings remain the same as in the previous years. The colour of the right ring can also be used to identify whether the animal was ringed in an odd year (red, orange, purple) or an even year (blue, green, black).

Two rings with inverted identical codes but different orientation were also used in 2024. This inversion improves legibility, as it is more likely to be able to read both characters of the code. The right aluminium ring is marked with a country-specific code of the national ringing centre, while the left IBM-ring is marked with the two-digit code and IBM-contact details (Table 18). As always in the odd-years only red, orange and purple rings have been used for the right ring (Figure 11).

**Small engraving facing up** **6 available ring colours**

*Figure 10: IBM-ringing system since 2021: 2 Aluminium rings in the six colours red, orange, purple, blue, green and black with large two-digit code and a smaller engraving for the national code (right) and aluminium standard IBM-engraving (left) facing up towards the body of the bird.*

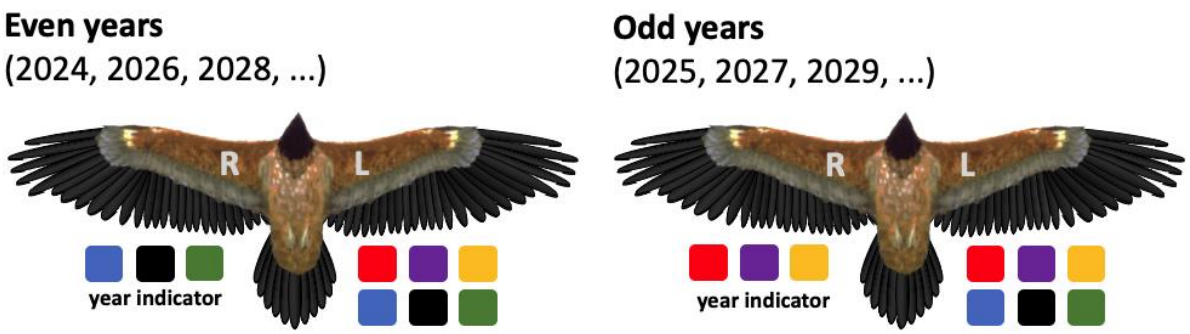



*Figure 11. Ringing scheme for odd and even years differ. In even years only blue, black and green rings are used for the right leg, while red, purple and orange are only used on the right leg in odd years.*

*Table 18. Engravings for the country-specific national code (####) and the IBM-standard ring (Contact ibm@4vultures.org).*

| Country | Right aluminium ring (year indicator) | Left aluminium ring |
|---|---|---|
| AUT | AB0010 KLIVV.AT AB#### KLIVV.AT | Contact ibm@4vultures.org |
| CHE | Vogelwarte Helvetia Sempach GYP#### | Contact ibm@4vultures.org |
| DEU | Radolfzell Germania www.ring.ac AAB### | Contact ibm@4vultures.org |
| ESP | Contact ibm@4vultures.org | Contact ibm@4vultures.org |
| FRA | Museum Paris TZ#### 4vultures.org | Contact ibm@4vultures.org |
| ITA | INFS OZZANO (BO) ITALY MC#### ring.ac | contact: recoveries@isprambiente.it |

### 8.1.1 Fading ring colours

Field observations have shown that the purple colour of the rings is not UV-resistant and fades to a bluish hue after just a few months (Figure 12). It is planned to apply a clear glaze to all rings in 2025 in an attempt to slow this process. Further monitoring will determine whether this method provides a lasting solution.


*Figure 12. Anodised purple rings showed colour fading after a few months exposed to UV radiation.*

## 8.2 Markings 2024

### 8.2.1 Released birds - Alpine range[3]

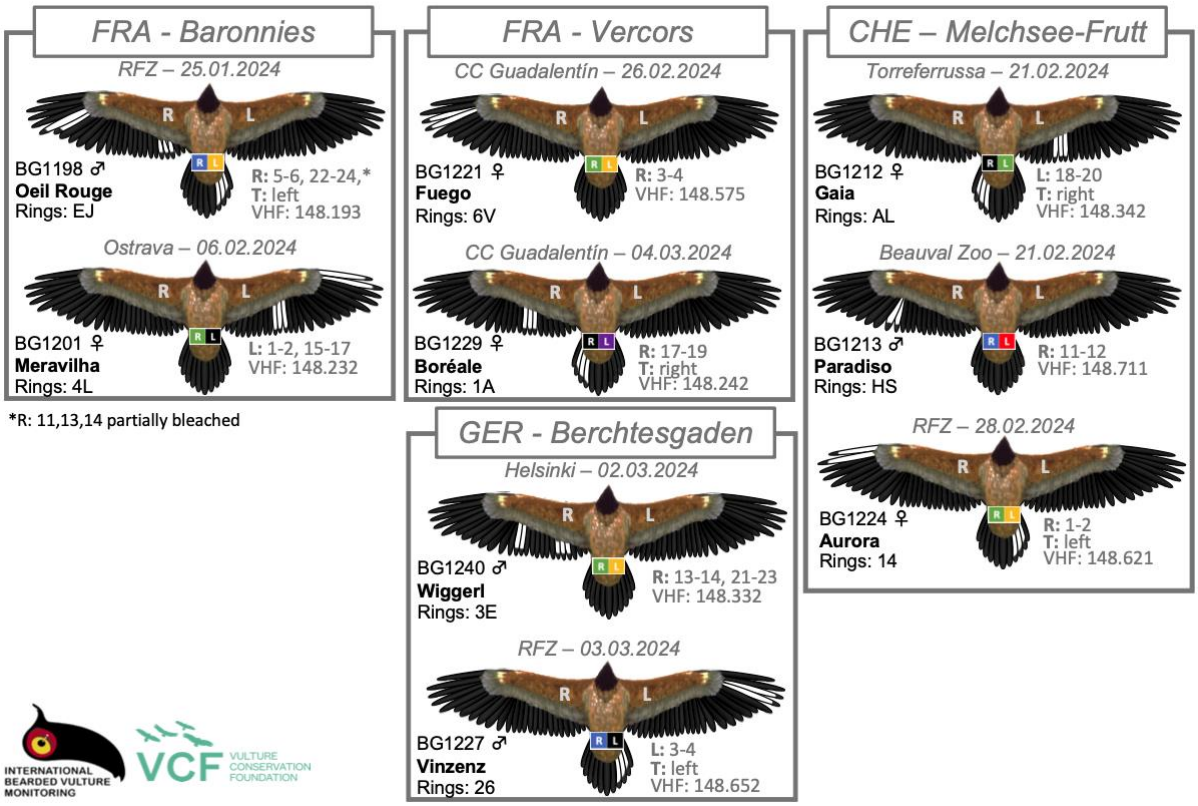



*Figure 13. Marking patterns of 9 Bearded Vultures released in the Alpine range in 2024.*

[3] *Download this file on: www.gyp-monitoring.com --> Downloads --> Marking pattern*

### 8.2.2 Released birds - Corsica, Massif Central and Maestrazgo project

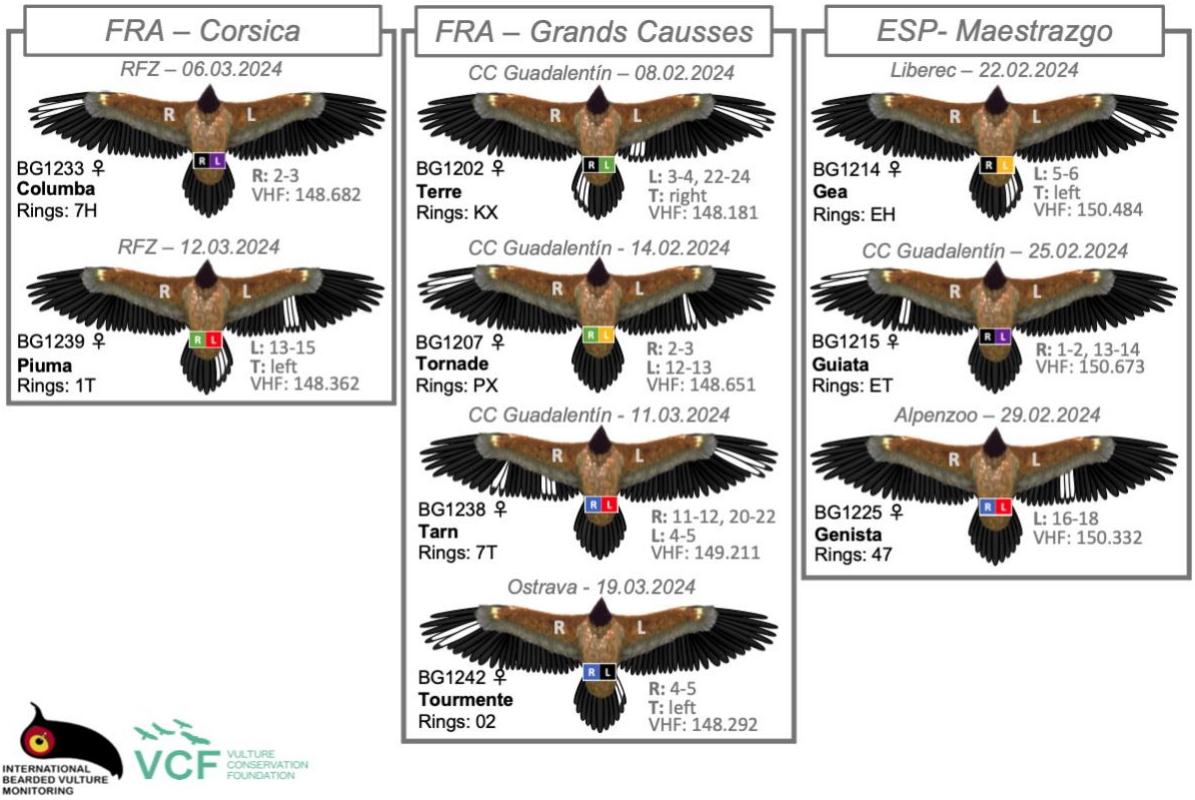



*Figure 14: Marking patterns of 9 Bearded Vultures released in Corsica, Massif Central and Maestrazgo project in 2024.*

**TÍSCAR**

Ala derecha: 13, 14 (Secundarias 3, 4)
Ala izquierda: 2, 3 (Primarias 8, 9)
Anilla izquierda: AE Azul
Anilla derecha: AE Verde
Sexo: Hembra

**ALFRANCA**

Ala izquierda: 13, 14 (Secunda. 3, 4), 20, 21, 22 (Secunda. 10, 11, 12)
Anilla izquierda: 09 Azul
Anilla derecha: 09 Negra
Sexo: Hembra

**SULAYR**

Ala derecha: 2, 3 (Primarias 8, 9)
Ala izquierda: 2, 3 (Primarias 8, 9)
Anilla izquierda: TV Morada
Anilla derecha: TV Negra
Sexo: Hembra

**DILAR**

Ala derecha: 13, 14 (Secunda. 3, 4), 20, 21, 22 (Secunda. 10, 11, 12)
Anilla izquierda: AP Verde
Anilla derecha: AP Azul
Sexo: Macho

**VELETA**

Ala izquierda: 2, 3 (Primarias 8, 9), 20,21, 22 (Secunda 10, 11, 12)
Anilla izquierda: JL Negra
Anilla derecha: JL Negra
Sexo: Hembra

*Figure 15. Markings of 5 birds released in Andalusia in 2024. (Source Junta de Andalusia)*

### 8.2.3 Wild-hatched birds

The IBM-network is set to increase its focus on marking wild hatched animals moving forward. Marking these birds provides valuable insights into their behaviour and survival, crucial factors to monitor and comprehend for the progress of the Bearded Vulture reintroduction project. In 2024 seven wild-hatched birds have been marked in France (Alpi, Geny, Timo, Genep, Farra, Fortiche and Franchet) (Figure 16).

In Andalusia four chicks were tagged with GPS and ringed with the IBM-ringing scheme (Simón, Nica, Castrileña and Vadillo) (Figure 17).

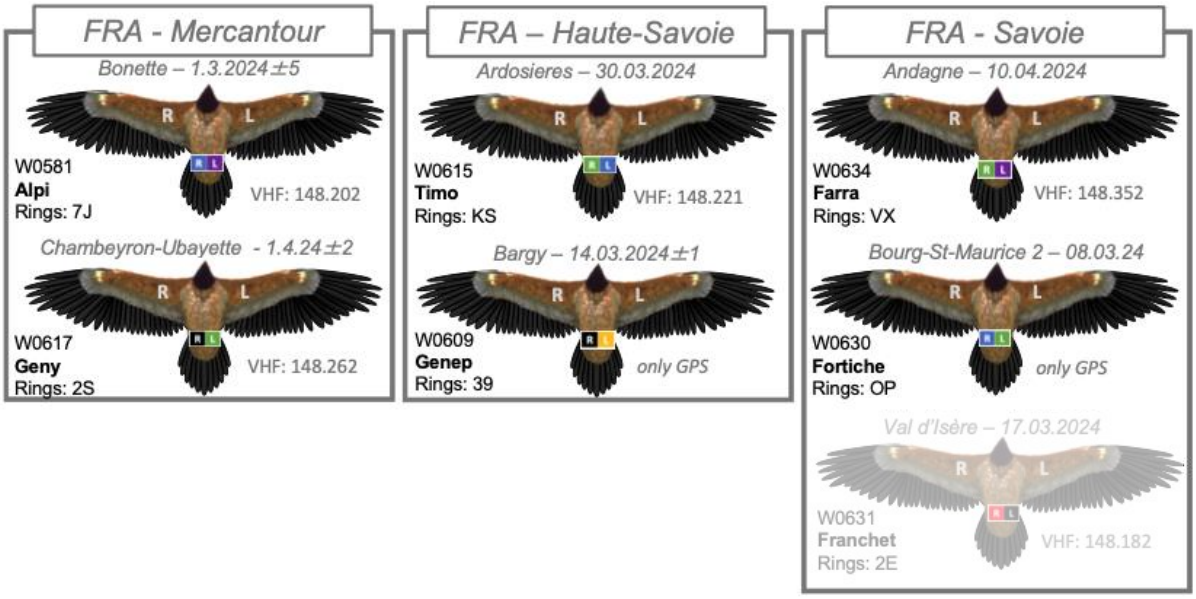



*Figure 16. Seven wild-hatched birds have been marked with GPS/GSM tags and coloured rings in 2024 in the Alpine range, all of them in France.*


*Figure 17. Four wild-hatched birds have been marked with GPS/GSM tags and coloured rings in 2024 in Andalusia, Spain.*

## 8.3 GPS-tagged birds in 2024

In order to gain insight into their life history, the first wild fledglings were ringed in Haute Savoie, France in 2013. Modern monitoring methods, such as GPS-tags, have been continuously developed and well-proven with the reintroduced Bearded Vultures. Such data provide valuable information on mortality (dropout) cases and the spatial behaviour of the released birds. With successful natural reproduction, the proportion of wild-hatched Bearded Vultures in the population is steadily increasing.

In order to gain knowledge about the spatial behaviour of wild-hatched birds, it was therefore decided to mark two wild fledglings (Neige and Gemapi, both in France) with GPS-tags for the first time in 2016. Since then, another 36 wild-hatched juveniles (2 in 2017, 5 in 2018, 4 in 2019, 7 in 2020, 6 in 2021, 5 in 2023, 7 in 2024) were marked with a GPS-tag in the Alps and in 2024 it was possible to mark 7 wild-hatched individuals in France (Alpi, Geny, Timo, Genep, Farra, Fortiche and Franchet and 4 wild-hatched birds in Andalusia (Simón, Nica, Castrileña and Vadillo); see Figure 16).

In total, movements of 97 Bearded Vultures (25 wild-hatched and 72 released birds) were followed by GPS-tracking and stored in the WildlifeMonitor in 2024 (Table 19). Besides 30 adult birds (≥6.cy), most of the tagged birds are non-adult individuals. With 39 males, 47 females and 12 unknowns, the sex-ratio is slightly skewed towards females.

## 8.4 Lost / offline GPS-tags

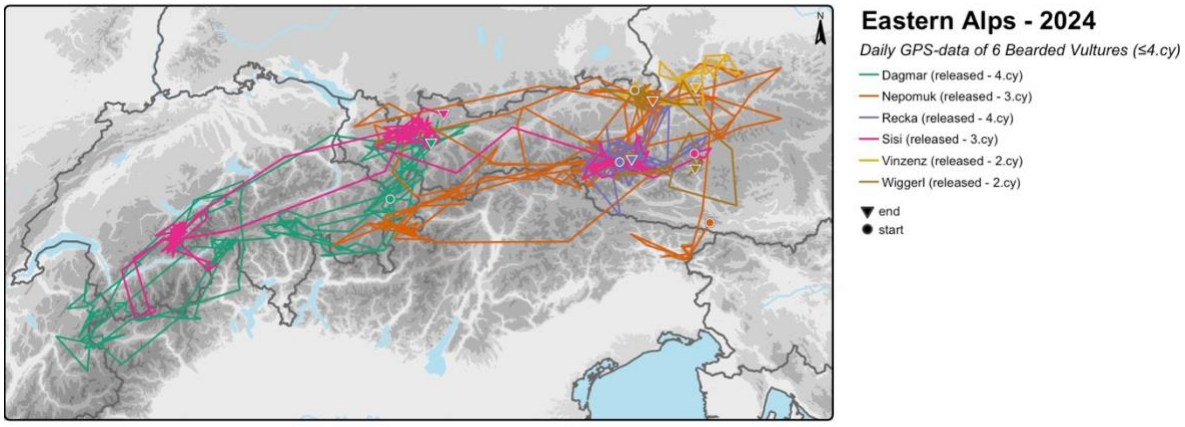
The following birds lost their GPS tags in 2024:

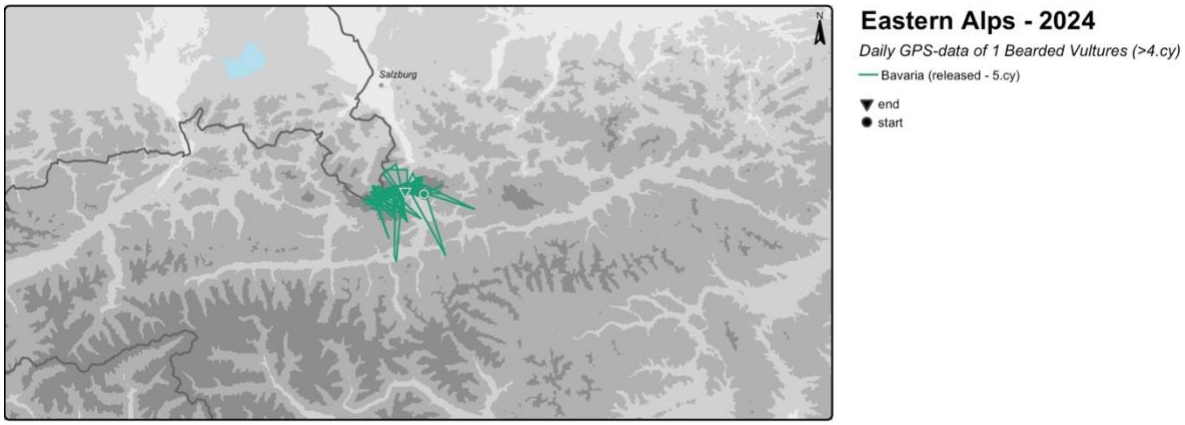
- Tourmente (BG1242) was GPS-tagged before her release in Grands Causses (FRA) in 2024. She lost her tag on the 25.8.2024. Tourmente lost some tail feathers and therefore the GPS tag fell off. The bird was observed after the loss of the tag in December 2024.
- Esperit (BG1135) was GPS-tagged before her release in the Maestrazgo Project (ESP) in 2022. Her tag stopped working on the 17.01.2024 and is not sending data since then.
- Severino-Zebru (W0372) was GPS-tagged in the nest (Zebru, ITA) on the 14.05.2021. The tag did not send any data since the 11.04.2024 and it remains unclear if the tag was lost or just stopped working.
- Cierzo (BG0899) was GPS-tagged before his release in Melchsee-Frutt (CHE) in 2016. The data transmission is irregular and the last data for 2024 was received on the 04.11.2024. It remains unknown if Cierzo lost the tag or if the tag has a technical failure.
- Muntagnolu (BG0890) was GPS-tagged before his release in Niolo Valley, Cosica (FRA) in 2016. Muntagnolu had an Argos / GPS tag, where the tag had a technical failure and no longer sent proper data. The last datapoint is from the 25.07.2024.
- Schils (BG0802) was GPS-tagged before his release in Calfeisen (CHE) in 2014. The tag worked for 10 years and finally, Schils lost the tag in the breeding territory in the National Park Vanoise where the team were able to retrieve the tag.
- Ewolina (BG0838) was GPS-tagged before her release in Melchsee-Frutt (CHE) in 2015. The GPS tag did not send data at the beginning of 2024 and started transmitting data in July 2024 from the breeding territory, from a single spot. However, it was not possible to retrieve the tag.

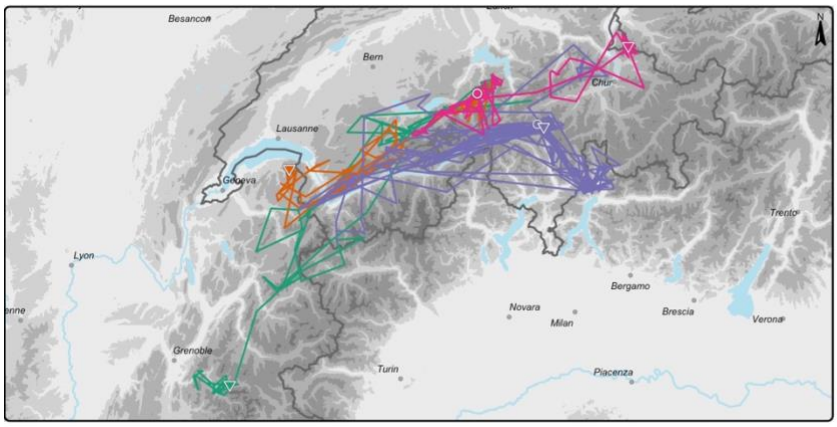
## 8.5 GPS-trajectories 2024 by region (released and wild-hatched)

Modern, solar-powered GPS tags make it possible to collect a large number of positions and transmit them via GSM (remote download). The data basis for the following illustrations is stored in the Wildlife Monitor database and is accessible to selected organisations.

For a better overview, only one position per day is shown in the following figures and the birds are also divided into two age groups (≤ 4. cy. and > 4.cy). To protect the sensitive areas around the breeding territories, no data of reproducing / territorial birds are shown.



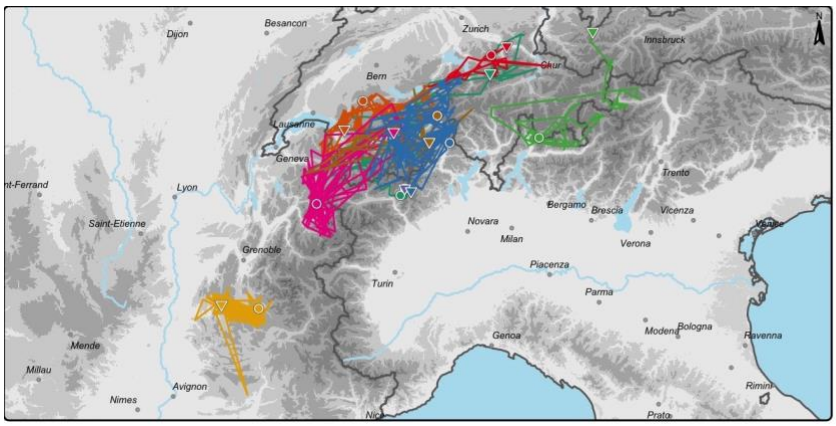



**Central Alps - 2024**

*Daily GPS-data of 4 Bearded Vultures (≤4.cy)*

- Aurora (released - 2.cy)
- Gaia (released - 2.cy)
- Obwaldera (released - 3.cy)
- Paradiso (released - 2.cy)

▼ end
● start

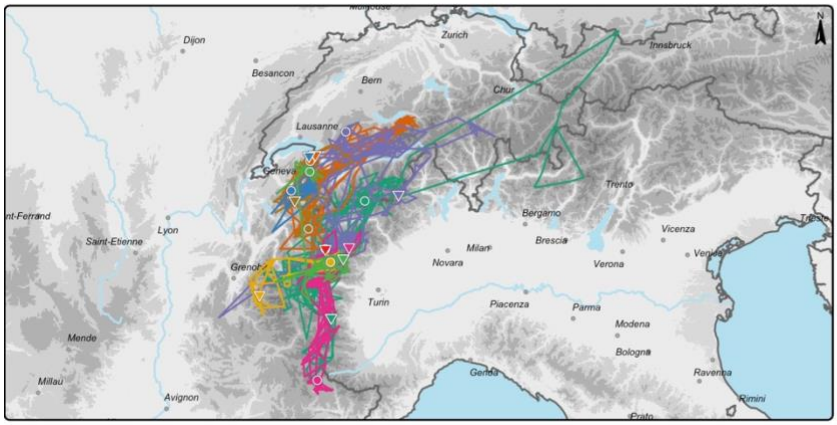



**Central Alps - 2024**

*Daily GPS-data of 8 Bearded Vultures (>4.cy)*

- BelArosa (released - 5.cy)
- Donna Elvira (released - 5.cy)
- Finja (released - 8.cy)
- Fortunat (released - 6.cy)
- Fredueli (released - 8.cy)
- Johannes (released - 9.cy)
- Luzerna (released - 6.cy)
- Severino-Zebru (wild - 5.cy)

▼ end
● start

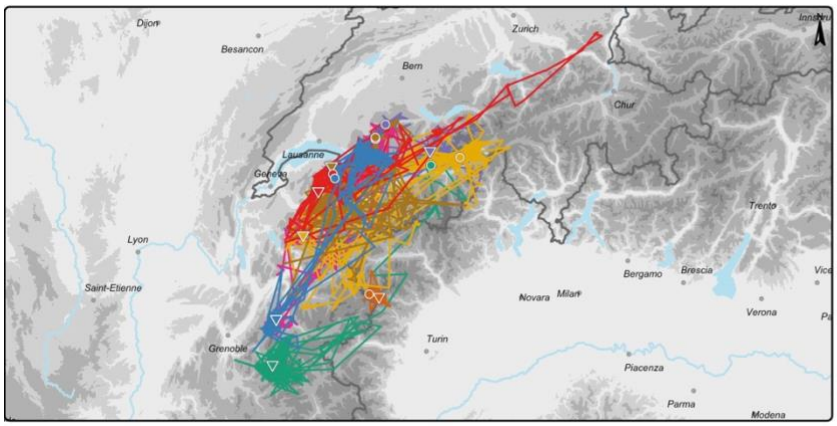



**North-western Alps - 2024**

*Daily GPS-data of 9 Bearded Vultures (≤4.cy)*

- Dome (wild - 4.cy)
- Elfie (wild - 4.cy)
- Erasmus (wild - 3.cy)
- Esprit (wild - 3.cy)
- Farra (wild - 2.cy)
- Fortiche (wild - 2.cy)
- Franchet (wild - 2.cy)
- Genep (wild - 2.cy)
- Timo (wild - 2.cy)

▼ end
● start

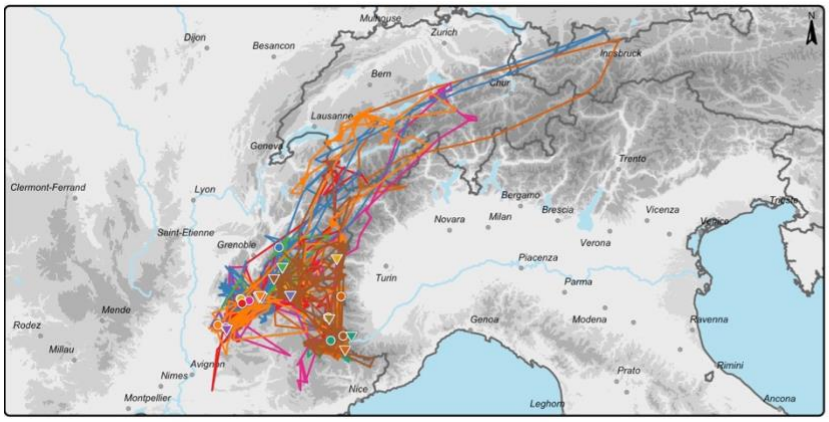



**North-western Alps - 2024**

*Daily GPS-data of 8 Bearded Vultures (>4.cy)*

- Altitude (wild - 7.cy)
- Gemapi (wild - 10.cy)
- Gregoria-Jordan (wild - 6.cy)
- Pierro (wild - 7.cy)
- Prazon-sixt-fer-a-cheval (wild - 6.cy)
- Sixt Buet (wild - 7.cy)
- Sunny (wild - 5.cy)
- Vidoc (wild - 6.cy)

▼ end
● start

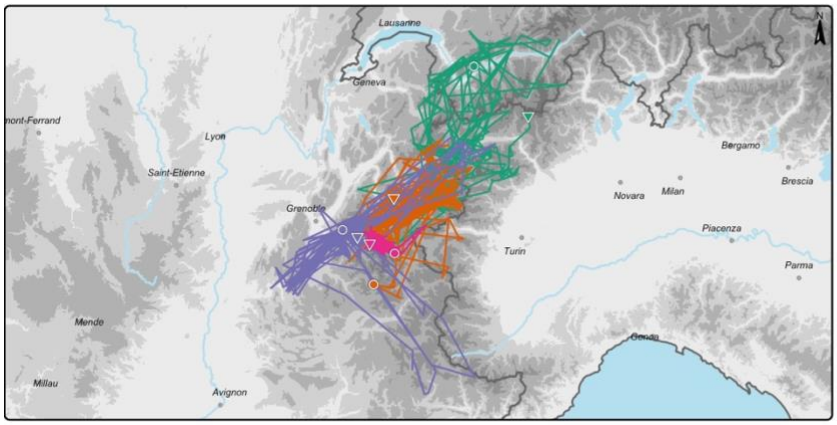



## South-western Alps - 2024

*Daily GPS-data of 12 Bearded Vultures (≤4.cy)*

- Alpi (wild - 2.cy)
- Baronnies (released - 3.cy)
- Boréale (released - 2.cy)
- Dromie (released - 3.cy)
- Fuego (released - 2.cy)
- Geny (wild - 2.cy)
- Jackpot (released - 3.cy)
- Le Croë (released - 3.cy)
- Meravilha (released - 2.cy)
- Oeil Rouge (released - 2.cy)
- Riglos (released - 4.cy)
- Trenta (wild - 3.cy)

▼ end
● start

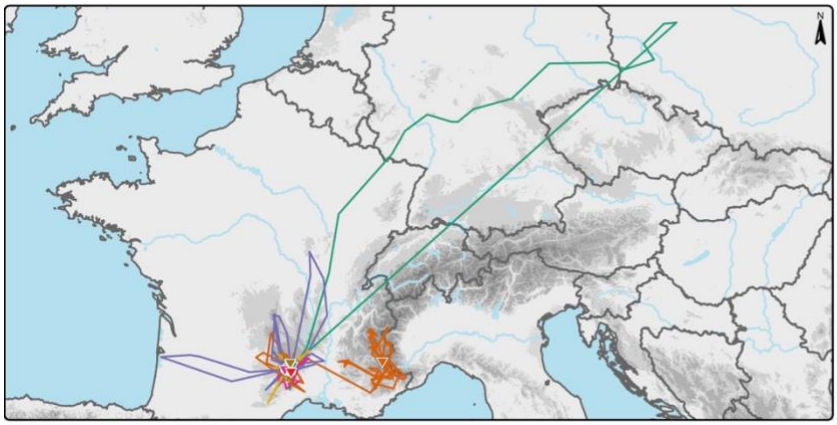



## South-western Alps - 2024

*Daily GPS-data of 4 Bearded Vultures (>4.cy)*

- Emparis (wild - 7.cy)
- Kobalann (released - 6.cy)
- Mistral (released - 7.cy)
- Simay (released - 8.cy)

▼ end
● start

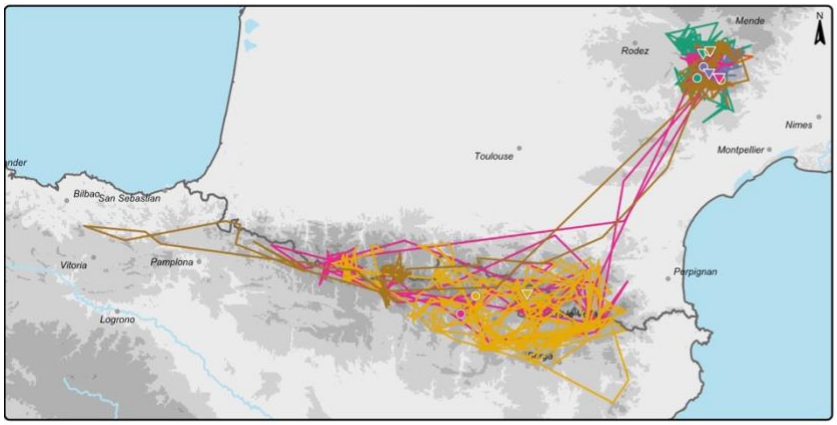


## Massif Central - 2024

*Daily GPS-data of 7 Bearded Vultures (≤4.cy)*

- Rei del Causse (released - 4.cy)
- Sargas (released - 3.cy)
- Serapias (released - 3.cy)
- Tarn (released - 2.cy)
- Terre (released - 2.cy)
- Tornade (released - 2.cy)
- Tourmente (released - 2.cy)

▼ end
● start




## Massif Central - 2024

*Daily GPS-data of 6 Bearded Vultures (>4.cy)*

- Cévennes (released - 7.cy)
- Fario (released - 6.cy)
- Ophrys (released - 6.cy)
- Peyre (released - 5.cy)
- Pradines (released - 5.cy)
- Pyrenees (released - 5.cy)

▼ end
● start

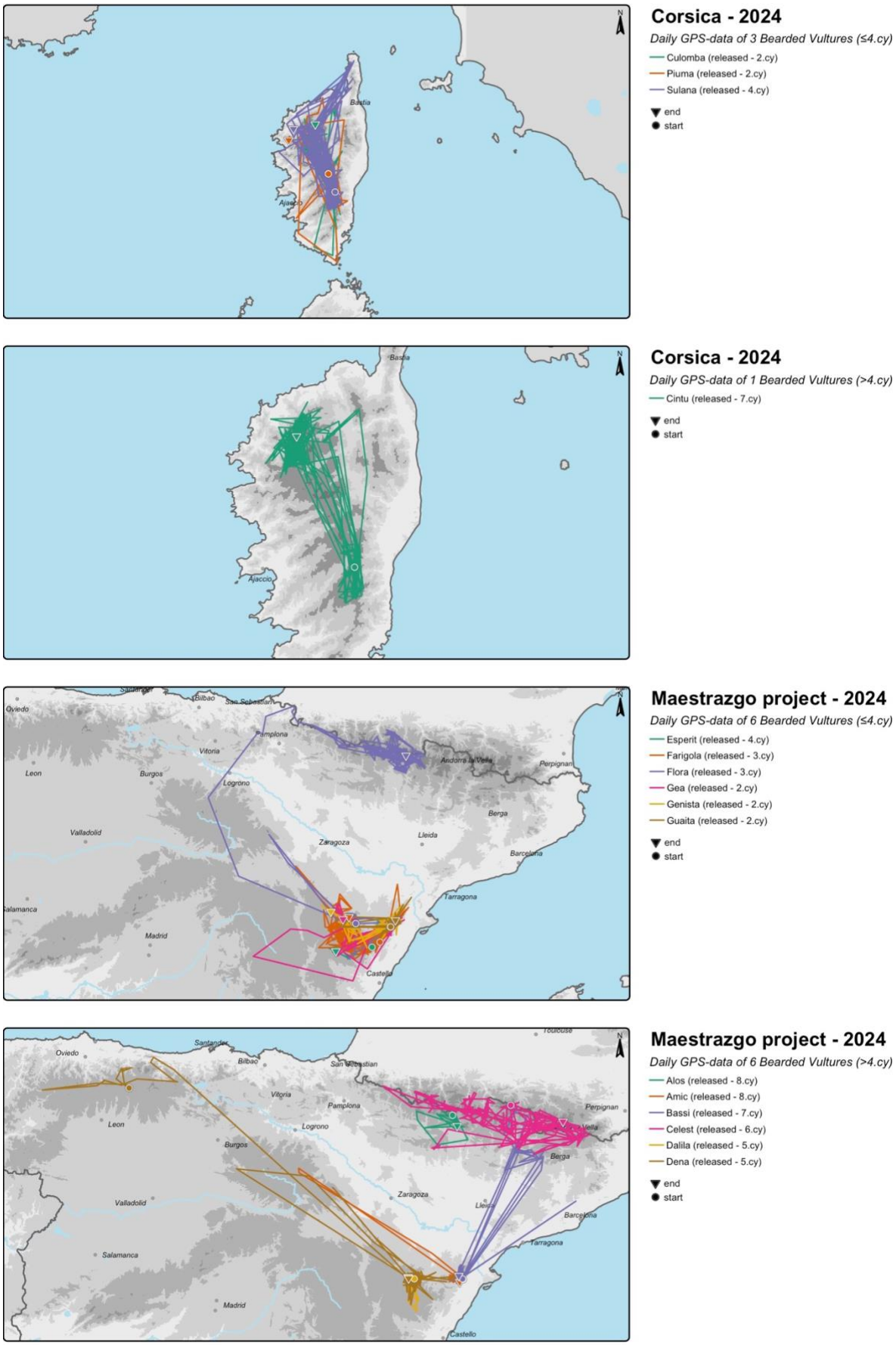



*Figure 18. GPS-trajectories of all non-reproductive birds that have been tracked with GPS in 2024.*

*Table 19: 98 birds from different age classes could be followed by GPS during 2023 thanks to the support by partner organisations. Start and End represent the day of the first and last location in 2024 respectively. The number of obtained localisations varies considerably among individuals (480 – 1'225'558 positions) and mainly depends on tag type used, age of the tag and battery charge level.*

| Animal | BirdID | Sex | Hatch | Place release | Start | End | Days with locations | Remark | Locations total |
|---|---|---|---|---|---|---|---|---|---|
| Alpi | W0581 | u | | wild-hatched | 04.07.24 | 31.12.24 | 181 | | 19'170 |
| Aurora | BG1234 | f | | Melchsee-Frutt (CHE) | 06.07.24 | 31.12.24 | 179 | | 31'441 |
| Boréale | BG1229 | f | | PNR Vercors, Trechenu-Creyers (FRA) | 04.08.24 | 31.12.24 | 150 | | 8'715 |
| Culomba | BG1233 | f | | Corsica, Niolo Valley (FRA) | 03.07.24 | 31.12.24 | 182 | | 16'529 |
| Farra | W0634 | u | | wild-hatched | 08.07.24 | 31.12.24 | 151 | | 14'937 |
| Fortiche | W0630 | u | | wild-hatched | 15.07.24 | 31.12.24 | 170 | | 153'683 |
| Franchet | W0631 | u | | wild-hatched | 24.07.24 | 03.11.24 | 103 | died on 3.11.24 | 2'839 |
| Fuego | BG1221 | f | | PNR Vercors, Trechenu-Creyers (FRA) | 02.07.24 | 31.12.24 | 183 | | 20'242 |
| Gaia | BG1212 | f | | Melchsee-Frutt (CHE) | 25.06.24 | 31.12.24 | 190 | | 21'634 |
| Gea | BG1214 | f | | Tinença de Benifassà (ESP) | 07.07.24 | 31.12.24 | 178 | | 3'187 |
| Genep | W0609 | u | | wild-hatched | 19.07.24 | 31.12.24 | 166 | | 7'892 |
| Genista | BG1225 | f | | Tinença de Benifassà (ESP) | 07.07.24 | 31.12.24 | 177 | | 14'623 |
| Geny | W0617 | u | **2024** | wild-hatched | 16.08.24 | 31.12.24 | 138 | | 1'857 |
| Guaita | BG1215 | f | | Tinença de Benifassà (ESP) | 14.06.24 | 31.12.24 | 199 | | 4'279 |
| Meravilha | BG1201 | f | | Baronnies, Léoux Valley (FRA) | 01.05.24 | 31.12.24 | 204 | | 18'168 |
| Oeil Rouge | BG1198 | m | | Baronnies, Léoux Valley (FRA) | 11.05.24 | 31.12.24 | 235 | | 12'458 |
| Paradiso | BG1213 | m | | Melchsee-Frutt (CHE) | 12.06.24 | 31.12.24 | 203 | | 26'213 |
| Piuma | BG1239 | f | | Corsica, Niolo Valley (FRA) | 26.07.24 | 31.12.24 | 143 | | 41'934 |
| Tarn | BG1238 | f | | Grands Causses,Frépestel (FRA) | 23.07.24 | 31.12.24 | 162 | | 9'553 |
| Terre | BG1202 | f | | Grands Causses,Frépestel (FRA) | 18.06.24 | 31.12.24 | 197 | | 23'405 |
| Timo | W0615 | u | | wild-hatched | 28.07.24 | 31.12.24 | 157 | | 10'139 |
| Tornade | BG1207 | f | | Grands Causses,Frépestel (FRA) | 18.06.24 | 31.12.24 | 197 | | 20'491 |
| Tourmente | BG1242 | f | | Grands Causses,Frépestel (FRA) | 24.07.24 | 25.08.24 | 33 | tag loss | 1'580 |
| Vinzenz | BG1227 | m | | Berchtesgaden, Halsgrube (GER) | 25.06.24 | 31.12.24 | 190 | | 12'503 |
| Wiggerl | BG1240 | m | | Berchtesgaden, Halsgrube (GER) | 30.06.24 | 31.12.24 | 185 | | 19'436 |

| Animal | BirdID | Sex | Hatch | Place release | Start | End | Days with locations | Remark | Locations total |
|---|---|---|---|---|---|---|---|---|---|
| Baronnies | BG1163 | f | | Baronnies, Léoux Valley (FRA) | 01.01.24 | 31.12.24 | 366 | | 810'708 |
| Dromie | BG1162 | m | | Baronnies, Léoux Valley (FRA) | 01.01.24 | 31.12.24 | 366 | | 63'527 |
| Erasmus | W0549 | u | | wild-hatched | 01.01.24 | 31.12.24 | 345 | | 167'915 |
| Esprit | W0545 | u | | wild-hatched | 01.01.24 | 31.12.24 | 366 | | 237'133 |
| Farigola | BG1172 | f | | Tinença de Benifassà (ESP) | 01.01.24 | 31.12.24 | 366 | | 83'060 |
| Flora | BG1177 | f | | Tinença de Benifassà (ESP) | 01.01.24 | 31.12.24 | 366 | | 55'064 |
| Jackpot | BG1175 | m | **2023** | PNR Vercors, Trechenu-Creyers (FRA) | 01.01.24 | 31.12.24 | 362 | | 214'754 |
| Le Croë | BG1169 | m | | PNR Vercors, Trechenu-Creyers (FRA) | 01.01.24 | 31.12.24 | 366 | | 62'030 |
| Nepomuk | BG1178 | m | | Berchtesgaden, Halsgrube (GER) | 01.01.24 | 31.12.24 | 366 | | 1'023'776 |
| Obwaldera | BG1185 | m | | Melchsee-Frutt (CHE) | 01.01.24 | 31.12.24 | 366 | | 806'133 |
| Sargas | BG1161 | m | | Grands Causses, Trévezel (FRA) | 01.01.24 | 31.12.24 | 366 | | 623'915 |
| Serapias | BG1164 | f | | Grands Causses, Trévezel (FRA) | 01.01.24 | 31.12.24 | 366 | | 1'225'558 |
| Sisi | BG1171 | f | | Berchtesgaden, Halsgrube (GER) | 01.01.24 | 31.12.24 | 364 | | 373'914 |
| Trenta | W0512 | f | | wild-hatched | 01.01.24 | 31.12.24 | 359 | | 897'074 |
| Dagmar | BG1145 | f | | Berchtesgaden, Halsgrube (GER) | 01.01.24 | 31.12.24 | 355 | | 9'890 |
| Dome | W0478 | u | | wild-hatched | 01.01.24 | 31.12.24 | 366 | | 108'656 |
| Elfie | W0437 | f | | wild-hatched | 01.01.24 | 31.12.24 | 366 | | 107'148 |
| Esperit | BG1135 | m | **2022** | Tinença de Benifassà (ESP) | 01.01.24 | 17.01.24 | 17 | tag failure | 913 |
| Recka | BG1147 | f | | Berchtesgaden, Halsgrube (GER) | 01.01.24 | 31.12.24 | 366 | | 49'109 |
| Rei del Causse | BG1128 | m | | Grands Causses, Trévezel (FRA) | 01.01.24 | 31.12.24 | 307 | | 209'705 |
| Riglos | BG1138 | m | | Baronnies, Léoux Valley (FRA) | 01.01.24 | 31.12.24 | 328 | | 47'240 |
| Sulana | BG1144 | m | | Corsica, Niolo Valley (FRA) | 01.01.24 | 31.12.24 | 366 | | 578'260 |

| Animal | BirdID | Sex | Hatch | Place release | Start | End | Days with locations | Remark | Locations total |
|---|---|---|---|---|---|---|---|---|---|
| Bavaria | BG1112 | f | | Berchtesgaden, Halsgrube (GER) | 01.01.24 | 31.12.24 | 366 | | 61'289 |
| BelArosa | BG1119 | m | | Melchsee-Frutt (CHE) | 01.01.24 | 11.07.24 | 193 | died on 11.7.24 | 12'096 |
| Dalila | BG1109 | f | | Tinença de Benifassà (ESP) | 01.01.24 | 31.12.24 | 366 | | 46'220 |
| Dena | BG1104 | f | | Tinença de Benifassà (ESP) | 07.01.24 | 31.12.24 | 349 | | 8'896 |
| Donna Elvira | BG1117 | f | | Melchsee-Frutt (CHE) | 01.01.24 | 31.12.24 | 366 | | 12'954 |
| Novo | BG1098 | m | **2021** | PNR Vercors, Trechenu-Creyers (FRA) | 01.01.24 | 31.12.24 | 364 | territorial | 76'864 |
| Peyre | BG1116 | m | | Grands Causses, Trévezel (FRA) | 01.01.24 | 31.12.24 | 366 | | 11'666 |
| Pradines | BG1122 | f | | Grands Causses, Trévezel (FRA) | 01.01.24 | 31.12.24 | 366 | | 197'730 |
| Pyrenees | BG1094 | f | | Grands Causses, Trévezel (FRA) | 01.01.24 | 31.12.24 | 360 | | 186'446 |
| Severino-Zebru | W0372 | m | | wild-hatched | 01.01.24 | 11.04.24 | 96 | tag loss or tag failure | 40'744 |
| Sunny | W0397 | m | | wild-hatched | 01.01.24 | 31.12.24 | 366 | | 81'579 |
| Aven | BG1067 | f | | Grands Causses,Frépestel (FRA) | 01.01.24 | 31.12.24 | 365 | territorial | 49'597 |
| Celest | BG1073 | f | | Tinença de Benifassà (ESP) | 01.01.24 | 31.12.24 | 366 | | 13'510 |
| Fario | BG1079 | f | | Grands Causses, Trévezel (FRA) | 01.01.24 | 31.12.24 | 366 | | 65'686 |
| Fortunat | BG1068 | m | | Melchsee-Frutt (CHE) | 01.01.24 | 31.12.24 | 352 | | 113'643 |
| Gregoria-Jordan | W0367 | u | **2020** | wild-hatched | 01.01.24 | 31.12.24 | 366 | | 401'821 |
| Kobalann | BG1063 | f | | PNR Vercors, Trechenu-Creyers (FRA) | 01.01.24 | 31.12.24 | 366 | | 31'198 |
| Luzerna | BG1071 | f | | Melchsee-Frutt (CHE) | 01.01.24 | 31.12.24 | 362 | | 12'773 |
| Ophrys | BG1078 | f | | Grands Causses, Trévezel (FRA) | 01.01.24 | 31.12.24 | 366 | | 78'858 |
| Prazon-sixt-…-Ch. | W0346 | u | | wild-hatched | 01.01.24 | 31.12.24 | 365 | | 235'617 |
| Vidoc | W0356 | f | | wild-hatched | 01.01.24 | 31.12.24 | 366 | | 9'068 |
| Altitude | W0313 | f | | wild-hatched | 02.01.24 | 31.12.24 | 350 | | 1'962 |
| Bassi | BG1033 | m | | Tinença de Benifassà (ESP) | 01.01.24 | 31.12.24 | 361 | | 24'818 |
| Cintu | BG1042 | m | | Corsica, Niolo Valley (FRA) | 01.01.24 | 31.12.24 | 361 | | 36'129 |
| Cévennes | BG1032 | m | | Grands Causses,Frépestel (FRA) | 01.01.24 | 31.12.24 | 366 | | 63'693 |
| Elvio | BG1026 | m | **2019** | PNR Vercors, Trechenu-Creyers (FRA) | 01.01.24 | 31.12.24 | 366 | territorial | 14'651 |
| Emparis | W0284 | f | | wild-hatched | 01.01.24 | 31.12.24 | 366 | | 6'428 |
| Mistral | BG1022 | m | | PNR Vercors, Trechenu-Creyers (FRA) | 01.01.24 | 31.12.24 | 366 | | 13'809 |
| Pamela | BG1031 | f | | Baronnies, Léoux Valley (FRA) | 01.01.24 | 31.12.24 | 366 | territorial | 43'500 |
| Pierro | W0301 | m | | wild-hatched | 01.01.24 | 31.12.24 | 366 | | 7'932 |
| Sixt Buet | W0285 | f | | wild-hatched | 01.01.24 | 31.12.24 | 315 | | 2'351 |

| Animal | BirdID | Sex | Hatch | Place release | Start | End | Days w.locs | Remark | Locations total |
|---|---|---|---|---|---|---|---|---|---|
| Alos | BG0992 | m | 2018 | Tinença de Benifassà (ESP) | 01.01.24 | 31.12.24 | 366 | | 10'392 |
| Amic | BG0995 | m | | Tinença de Benifassà (ESP) | 01.01.24 | 31.12.24 | 366 | | 14'072 |
| Finja | BG1003 | f | | Melchsee-Frutt (CHE) | 01.01.24 | 31.12.24 | 353 | | 27'309 |
| Fredueli | BG1001 | m | | Melchsee-Frutt (CHE) | 01.01.24 | 31.12.24 | 324 | | 9'836 |
| Lapie | W0251 | m | | wild-hatched | 01.01.24 | 31.12.24 | 366 | territorial | 2'342 |
| Simay | BG0983 | m | | Baronnies, Léoux Valley (FRA) | 01.01.24 | 21.12.24 | 355 | | 9'284 |
| Gypsy | W0209 | m | 2017 | wild-hatched | 01.01.24 | 31.12.24 | 363 | territorial | 5'694 |
| Johannes | BG0964 | m | | Melchsee-Frutt (CHE) | 14.08.24 | 31.12.24 | 140 | GPS-tagged after recovery | 9'830 |
| Léoux | BG0950 | f | | Baronnies, Léoux Valley (FRA) | 01.01.24 | 31.12.24 | 356 | territorial | 1'695 |
| Mison | W0230 | f | | wild-hatched | 01.01.24 | 05.08.24 | 212 | territorial, died on 5.8.24 | 7'188 |
| Cierzo | BG0899 | m | 2016 | Melchsee-Frutt (CHE) | 01.01.24 | 04.11.24 | 135 | territorial, irregular transm. | 5'176 |
| Gemapi | W0196 | f | | wild-hatched | 01.01.24 | 31.12.24 | 365 | | 4'927 |
| Girun | BG0904 | f | | Baronnies, Léoux Valley (FRA) | 20.01.24 | 31.12.24 | 263 | territorial | 666 |
| Muntagnolu | BG0890 | m | | Corsica, Niolo Valley (FRA) | 01.01.24 | 31.05.24 | 146 | territorial, tag failure | 480 |
| Fortuna | BG0843 | m | 2015 | NP Hohe Tauern, Dorfertal (AUT) | 01.01.24 | 31.12.24 | 316 | territorial | 2'931 |
| Roman | BG0854 | m | | PN Alpi Marittime, Argentera (ITA) | 04.01.24 | 31.12.24 | 266 | territorial | 606 |
| Schils | BG0802 | m | 2014 | Calfeisen, Vaettis (CHE) | 01.01.24 | 13.11.24 | 280 | territorial, tag loss | 13'865 |
| Layrou | BG0761 | m | 2013 | Grands Causses, Trévezel (FRA) | 01.01.24 | 31.12.24 | 342 | territorial | 10'982 |
| Guillaumes | BG0411 | f | 2003 | PN du Mercantour, Vignols (FRA) | 15.11.24 | 31.12.24 | 47 | GPS tagged after recap., territ. | 1'111 |
| **97 tagged birds** | | | | | | | | **GPS-positions in 2024:** | **10'374'304** |

# 9 Dropouts

Dropouts include all incidents where individuals have been removed from the population (mortality, recapture). This also applies to birds that have been recaptured and could be released again (recovery). A recapture is in any case the last solution, which is why it must be assumed that these birds would not have survived without human intervention and would have died under natural conditions. However, if a hatchling dies before fledging, this loss is referred to as breeding failure and it is therefore not included in the dropout statistics (see IBM-standard, chapter 4.2). Dropouts that occur during reintroduction phase are described as "unsuccessful" reintroductions.

Mortalities of 8 Bearded Vultures have been reported in 2024: 2 each in France, Spain, Switzerland and Italy (Figure 19). Anthropogenic causes are responsible for more than 1/3 of the mortalities. This clearly shows that the number of deaths might be reduced by continuing education and protection measures.

However, thanks to the close monitoring by GPS-tracking and quick intervention of the IBM partners and the regional coordinators, it was possible to recover 6 released Bearded Vultures from different age classes (3 juveniles, 1 immature, 2 adults) and release them again.

Torreferrussa (BG1209) was attacked and killed by a fox at the hacking site during the releasing process.

*Table 20: List of all 15 reported dropouts from 2024. BirdIDs starting with "BG" stand for released birds, while "W" stands for wild-hatched birds.*

| Bird | BirdID | Age [cy] | Dropout | Date | Country | Reason | Type |
|---|---|---|---|---|---|---|---|
| Tinizong2023 | W0542 | 2 | mortality | 07.02.24 (±7) | ITA | collision with powerline | anth. |
| Lopezosa | W0428 | 4 | | 21.02.24 | ESP | shot | anth. |
| Seo | BG1118 | 4 | | 03.06.24 (±2) | ESP | unknown | unkn. |
| unknown | - | 4-5 | | 18.06.24 (±60) | ITA | unknown | unkn. |
| BelArosa | BG1119 | 4 | | 11.07.24 | CHE | collision with powerline / electrocution | anth. |
| Mison | W0230 | 8 | | 05.08.24 (±1) | FRA | intraspecific competition (?) | nat. |
| Trupchun2024 | W0604 | 1 | | 13.08.24 (±3) | CHE | drown in stream | nat. |
| Franchet | W0631 | 1 | | 03.11.24 (±1) | FRA | cachexie | unkn. |
| Johannes | BG0964 | 8 | recovery | 29.04.24 | CHE | weakness | unkn. |
| Oeil Rouge | BG1198 | 1 | | 15.05.24 | FRA | misbehaviour | nat. |
| Rei del Causse | BG1128 | 3 | | 28.05.24 | POL | weakness | nat. |
| Guillaumes | BG0411 | 22 | | 15.09.24 | CHE | entangled in fence | anth. |
| Piuma | BG1239 | 1 | | 26.10.24 | FRA | misbehaviour | nat. |
| Veleta | BG1245 | 1 | | 22.11.24 | ESP | weakness | nat. |
| Torreferrussa | BG1209 | 1 | unsuccessful release | 22.05.24 | ESP | fox predation | nat. |

## 9.1 Mortalities

### 9.1.1 Tinizong2023 (W0542)

On the 14.02.2024, an immature bird was discovered dead in Dialley Valpelline, Aosta (ITA). Genetic analysis confirmed the bird's identity as Tinizong2023 and it was found that the cause of death was a collision with a power line. The bird had hatched in the wild in Grison (CHE) in 2023.

### 9.1.2 Lopezosa (W0428)

On the 21.02.2024 the subadult bird Lopezosa was shot in Nerpio (ESP) and was found a few days later thanks to GPS-telemetry data. The bird had hatched in the wild in 2021.

### 9.1.3 Seo (BG1118)

On the 03.06.2024 the subadult bird Seo was found dead with an open fracture of the right humerus in Sierra María-Los Velez (Almeria province ESP), at the base of a cliff. Despite chronic/debilitating disease is ruled out and tests were negative for pesticides and rodenticides, the cause of death remains unknown. The bird was released in Cazorla National Park (ESP) in 2021.

### 9.1.4 unknown immature-subadult

Photos of the Bearded Vulture feathers were uploaded to iNaturalist by an anonymous observer in June. During a subsequent field visit in Val di Viso (ITA), no carcass was found - only feathers, where the DNA containing parts are missing

While the large number of feathers suggests a fatality, the limited available evidence prevents any definitive conclusions regarding the bird's identity or cause of death. The feathers do indicate, however, that the individual was an immature or subadult bird.

Since Golden Eagle feathers were also found among the remains, and given the history of interspecific competition in the area, this could be a possible cause of death. (Foto Enrico Bassi)

### 9.1.5 BelArosa (BG1119)

On 11.07.2024, a search was organized to locate the bird after anomalies were detected in its GPS data. Unfortunatelly, the subadult Bearded Vulture BelArosa was found dead approximately 1.2 km from cable car cables in Urnerboden (CHE). The bird exhibited an open fracture of the humerus and signs of electrical shock, strongly suggesting that the cause of death was a collision with electrical cables. BelArosa had been released into the wild in Melchsee-Frutt (CHE) in 2021. (Foto Fredy Arnold)

### 9.1.6 Mison (W0230)

On the 05.08.2024 the adult bird Mison was found dead near Saint-Christophe-en-Oisans (FRA). There is reason to suspect that the bird was killed due to intraspecific competition with Altitude (W0313), as Altitude has taken over Mison's place in the Veneon1 breeding territory. Mison had hatched in the Valais (CHE) in 2017 and was rescued after falling from the nest before fledging. After three months recovery from the injuries, she was released in Baronnies (FRA). Mison was able to raise three offsprings.

### 9.1.7 Trupchun2024 (W0604)

On the 13.08.2024 the juvenile bird Trupuchun2024 was found dead lying in a creek bed in Val Müschauns (CHE) only 500m away from the territory where it had hatched. No external injuries were found and it is assumed that the bird has drown in the river. (Foto David Jenny)

### 9.1.8 Franchet (W0631)

On the 03.11.2024 the juvenile bird Franchet was found dead in Val d'Isère (FRA). The bird died of cachexia, but the exact cause is unclear as all tests for toxins and pesticides were negative. The main lesion highlighted during the autopsy of this bird is the invasion of the air sacs and the crushing of the lungs by a compact and chalky tissue. The still functional lung tissue seems restricted to 1/2 or 1/3 of the usual capacity. The encephalon also presents a congestion of undetermined origin. Franchet had hatched in the wild in the breeding territory in the region in 2024.

## 9.2 Recoveries

### 9.2.1 Johannes (BG0964)

On the 29.04.2024 the adult bird Johannes had to be recaptured in Glarus (CHE). The bird was found in a severely weakened state, suffering from severe anaemia - evidenced by the absence of the red scleral ring and a critically low red blood cell count. No lead was detected in the body, ruling out gunshot injury, though there was blood on the chest. Initial X-rays revealed no visible bone fractures. Following a blood transfusion and infusion, the bird was released again on 14.08.2024. The bird has initially been released in Melchsee-Frutt (CHE) in 2017.

### 9.2.2 Oeil Rouge (BG1198)

On the 15.05.2024 the juvenile bird Oeil Rouge had to be recaptured in Léoux Valley (FRA), after the bird was trapped at the bottom of the Eygues Gorge, despite favorable weather conditions at the time. The bird that had been released in Baronnies (FRA) could be released again on the same day.

### 9.2.3 Rei del Causse (BG1128)

On the 28.05.2024 the immature bird had to be recaptured in Zawady (POL) due to weakness after a prolonged excursion to north (see Figure 18). After recovery in captivity the bird was released again in the Massif central on the 29.07.2024. It was already the second time the bird had to be recaptured after an excursion flight to north to the Island Rügen (GER) in July 2023. The bird was initially released in the Massif Central (FRA) in 2022.

### 9.2.4 Guillaumes (BG0411)

On the 15.09.2024 hikers found the adult bird Guillaumes entangled in a fence (single electric fence) in Ormont-Dessus (CHE). The gamekeepers were alerted and were able to rescue the slightly injured bird, which was released back into the wild on 5.11.2024 after recovering in captivity. Guillaumes was initially released in the Parc National du Mercantour (FRA) in 2003.

(Foto Michel Perreten)

### 9.2.5 Piuma (BG1239)

On the 26.10.2024 the juvenile bird Piuma had to be recaptured in Montegrosse (FRA) after anomalies were detected in the movement patterns (GPS) of the bird. After a short recovery in captivity the bird could be released again on the 12.11.2024. The bird was initially released in Ghisoni (FRA) on Corsica in 2024.

### 9.2.6 Veleta (BG1245)

On the 22.11.2024 the juvenile bird Veleta had to be recaptured in the Punta Entinas-Sabinar Natural Area (ESP) after anomalies were detected in the movement patterns (GPS) of the bird. After a short recovery in captivity the bird could be released again on the 16.12.2024 in the Sierra Nevada (ESP). The bird was initially released in Sierra Nevada Natural Park (ESP) in 2024.

## 9.3 Unsuccessful release

### 9.3.1 Torreferrussa (BG1209)

On the 22.05.2024 the juvenile bird Torreferrussa was killed by a fox at the hacking site in National Park Cazorla, Segura y Las Villas (ESP). It is already the second case of fox predation at this hacking site.

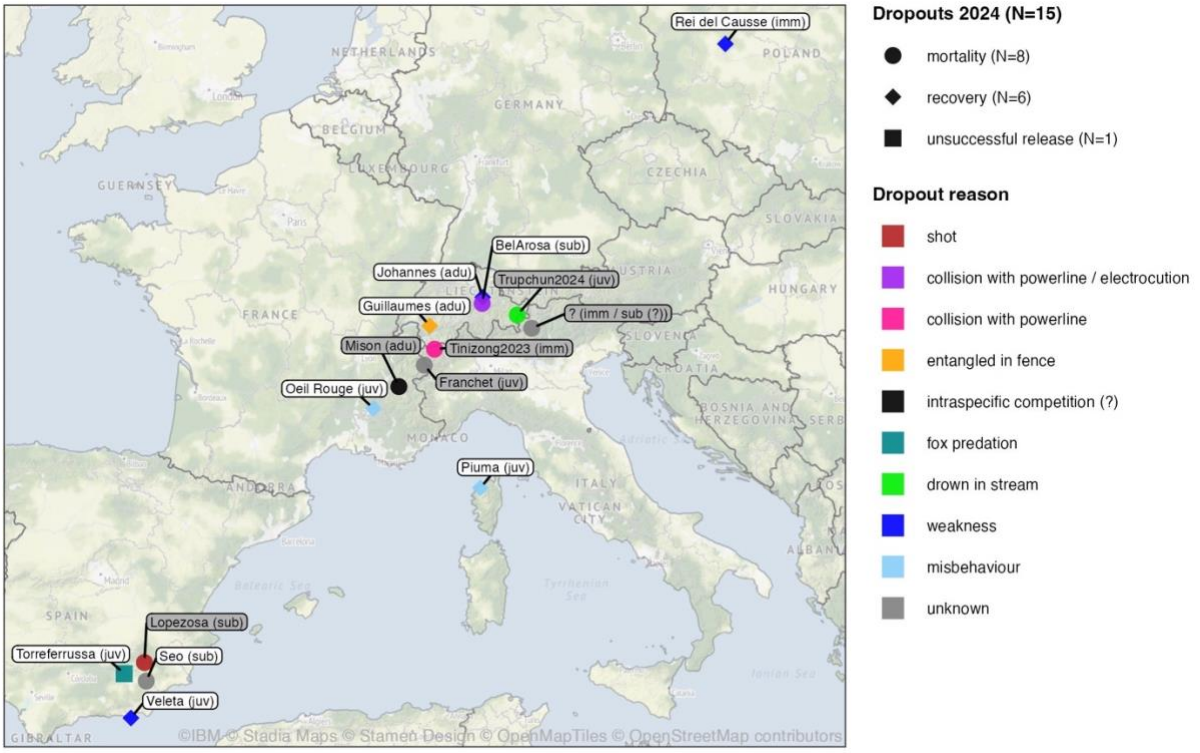



*Figure 19. 8 mortalities, 6 recoveries and 1 unsuccessful release of Bearded Vultures in 2024. Grey labels mark wild-hatched individuals (N=6).*

# 10 Acknowledgements

Thanks to all the field workers, assistants, gamekeepers, hunters, ornithologists and non-professional observers who report Bearded Vulture sightings and valuable information during the reproduction monitoring. Furthermore, thanks to the regional coordinators of the IBM-network and associated organisations who enter the data in the IBM, coordinate the monitoring network within their area of responsibility and contribute to this report with their inputs. Also, thanks to the valuable inputs by Franziska Lörcher (VCF) during the review of this report.

Only thanks to the financial support of the IBM-partners and the funding organisations MAVA, a Swiss foundation and LIFE GypConnect, LIFE GypRescue, LIFE GypAct, Bearded Vulture LIFE, the IBM-data collection could be summarised and published in this report.