INTERNATIONAL
BEARDED VULTURE
MONITORING

6th Alpine Bearded Vulture Observation Days

October 7th – October 16th 2011

A co-operation within the International Bearded vulture Monitoring (IBM)

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&

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Scientifically and technically managed by the

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1. Introduction

The 6th edition of the popular Alpine Observation Days (AOD) was organized by the Bearded vulture monitoring network across the Alps during the first fortnight of October 2011. This event has become an indispensable date for ornithologists and bird-watchers interested in the species throughout Central Europe, attracting every year more than 100 new observers on average (comparing participation from 2006 to 2011). Besides their high value for its role in public awareness, The AOD's are also very important in order to provide information about the population status and distribution of birds. Thanks to the coordination of local administrators the synchronous counts was planned in detail on the local/regional level.

The date for the AOD is usually decided by mutual agreement of all partners during the meeting of the IBM Steering Committee considering the success of previous years, the most suitable months to observe Bearded vultures and the availability of observers. This year, the dates proposed during the meeting (25th of September or 2nd of October) had to be changed due to the concurrence with other events, and therefore a new date was selected to be between the 7th and the 16th of October (focal date on the 8th). Unfortunately the Alpine winter came earlier than expected and the weather hindered the optimum work of collaborators and volunteers in some regions of the Alps, especially in the North and Central areas. However, despite the harsh conditions in some important areas, more than 630 people (!) gathered together to take part in the event, setting a new record of participation, out of which the vast majority (around 600) attended during the focal date (8th of October), which shows the high commitment and enormous organizational effort by the local coordinators. However good the participation was, the result of observed birds is clearly lower than last year, with a total of 239 observations of Bearded vultures in the whole period, whereas in 2010 more than 300 observations were reported. Nevertheless, unlike last year, when only 1/3 of these observations took place in the focal date, this year around 67% of all the observations were made during the focal date. In order to avoid double counting, only the sightings done in the period 7th - 9th of October have been considered for the general counts. Although not part of the Alpine Observation Day as such, some observations have been made independently in the selected period and have also been added to this report.

This year, the IBM Administration prepared together with the collaboration of the IBM Members a new protocol for the Alpine Observation Days, which was distributed among the partners and collaborators in advance. It must be pointed out that the outcome was extremely positive and the use of this protocol facilitated the harmonization of the data-taking and work both in the fields and afterwards during the processing of the information. It has been observed during the years that there are some observation gaps to be closed in order to cover the whole Alpine range, but although the complete coverage seems unfeasible on the short future, some of these gaps have been successfully reduced this year (e.g. Central Alps).

2. Methods and Data

In 2006 the coordinated simultaneous count of Bearded vultures was held for the first time in the Alps. Since then, the event has developed to involve hundreds of observers spread throughout the Alpine range, with a higher level of coordination and harmonization in the data. Although the area covered by the observers has increased over the years, the whole Alpine range (~ 183.067 Km^2) cannot be completely covered simultaneously, so it is unfeasible to monitor the whole Bearded vulture population. Therefore, the main idea behind the AOD is not exactly to determine the whole population in the Alps, but to assess the evolution of the population on the regional level, which can be achieved by standardizing the work (sampling effort, observation points, etc.) year after year. For this reason, it is necessary to gather some certain information such as observation sites (coordinates) even if there were no birds observed, so that it is possible to determine the area covered by the observers and therefore an index for abundance of vultures e.g. per km^2. While in former years the data sent to the IBM Administration came in diverse formats and quality, this time the information provided was more precise, due to the use of the new common protocol and mainly to the experience and effort of the collaborators.

In the IBM Webpage, www.gyp-monitoring.com, it is possible, and strongly recommended, to download the aforementioned protocol, together with the pertinent registration forms (Downloads→ Protocols & manuals→ Observation Days) in excel format both for observers and coordinators with an example of how to fill in the data obtained.

Date	Team	Post	Post coordinates		Period		Results	Age	Bird presence		Obs coordinates		BirdID/Hypothesis	Description	Photo
			lat. (dec)	long. (dec)	Start	End			Start	End	lat. (dec)	long. (dec)			
08.10.2011	PNM	19 Col d	6,710	44,534	10:00	16:00	1	uvenile (1.year)	10:15	10:23	6,715	44,584	BV670 Tussac	1 young BV flyi	yes

Figure 1: Example of how to fill in the table with the data gathered in the AOD

On another section of the Home page (Downloads→ Identification help) it is also possible to download an identification booklet (produced by the Natural History Museum of Crete / University of Crete and the Hellenic Ornithological Society) to harmonise age determination. This booklet can be found in German, French and Italian. Likewise, the *.pdf file of the updated marking pattern used for juvenile vultures in the Alps is also available.

→ NOTE: How to send coordinates to the IBM Administration:

When working with coordinates, the IBM has been using the **World Geodesic System, 1984** (**WGS84**, see http://es.wikipedia.org/wiki/WGS84 for information). Although most of the partners provide the geographic references in this suggested format, we are still receiving data in different unknown systems. The conversion from these various formats (for instance ED50, UTM or French Geodesic System NTF, among others) into WGS84 is always problematic and often insurmountable, leading to an important loss of time for both the partner and the administration in crossed mailing, and eventually loss of information when the harmonising is not possible. But another problem that has been found occasionally is that there have been mistakes done by the partners when converting the coordinates into WGS84, which have not been detected beforehand by them and neither by the administration when received, but later on, so it was necessary to repeat all figures and calculations, with the resulting extra investment of time and effort. In order to avoid

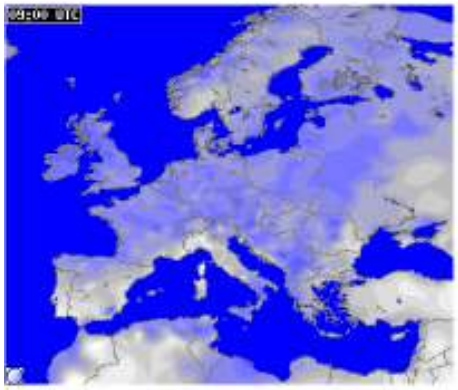
these situations in the future, it would be strongly recommended that the partners check the coordinates they are about to send **in advance**, by verifying that they actually mark the point they are supposed to by testing in Google Earth®.

For those who have never used this program, it is a *freeware* that can be directly downloaded from the website of Google® http://www.google.com/intl/es/earth/download/ge/. Once Google Earth® has been installed in the computer, it is possible to visualize some points in the map simply by uploading an excel file (.xls) with their coordinates in the page http://www.earthpoint.us/ExcelToKml.aspx. The excel file must follow a certain format (see http://www.earthpoint.us/Downloads/ExcelToKmlDemo.zip). The minimum file consist of a sheet with 2 columns with the titles **Latitude** and **Longitude**, but it is possible to add other columns for more specific treatment, such as **name** (it will be seen directly in the map), **description** (it appears in a short note that spreads when placing the cursor on the selected point) and **icon** (there is a list with all the different icons that can be used in the map that can be found at the lower part of the Excel-to-KML site). The coordinates must be provided in **WGS84**. When the excel file is finished, it can be directly imported by clicking in the "browse" button and select the file from its directory in your computer, and then saving the file in .kml format (Google Earth® file). Further information can be looked up in the Excel-to-KML website. The website allows the import of up to 200 rows for free; in case the file to be uploaded contains more than that, it is recommended to simply divide the file in consecutive files no longer than 200 rows each.

The date for the Alpine Observation Days was first proposed by common agreement during the meeting of the IBM Steering Committee in Vercors (France) for the last weekend of September (25th of September), with an alternative proposal for the 2nd of October. However, the first date had to be dismissed in order to avoid coincidence with the Italian Ornithological Congress 2011, whereas the second one also would coincide with the EuroBirdwatch, an annual event organised by Birdlife International. Therefore, a new date was suggested by the IBM and accepted by the majority of partners: the 8th of October. The buffer period spanned until the end of the following weekend, 16th of October, so all data collected in this period was included in the report, although only observations 1 day before and after the focal date have been used for population estimations, since using a larger time-frame would increase the probability of double-counting due to the high mobility of bearded vultures (especially juveniles and immatures). At this period of the year, it is possible to observe the birds in a confined area and therefore locate new territories and pairs, since it's in this time when birds are more active in nest building, copulation, synchronous flights, etc.

The weather conditions (see **figure 2**, extracted from the page www.wetteronline.at) during this year's AOD were very variable depending on the region, being suitable in some areas such as the SW- Alps, but unfortunately winter arrived earlier than expected to some regions, especially the eastern-central Alps. Nevertheless, even in some areas with fog, rain and snow, the number of observation posts on the whole week was higher than 460, more than 80% (80,38%) used on the focal date (8th of October). Nevertheless, the result of the counting strongly correlates with the weather conditions, so regions with higher precipitation have the lowest number of observations. In most of the sites, other species of raptors and vultures were counted, such as Golden eagle (*Aquila Chrysaetos*) or Griffon vulture (*Gyps fulvus*); it is recommended to use those observations as a reference in the identification of suitable places for Bearded vultures, as well as differentiate between areas without Bearded vultures and those with monitoring deficiency.

Relative humidity (%) 8/10/2011 09:00



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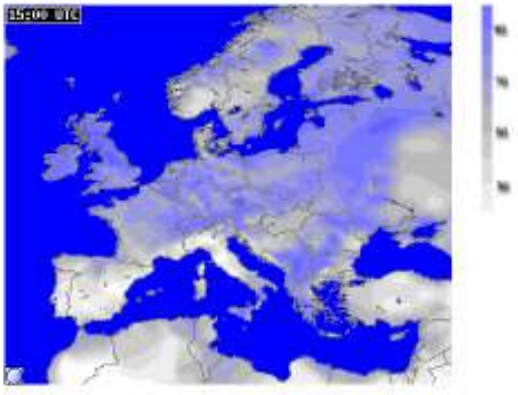
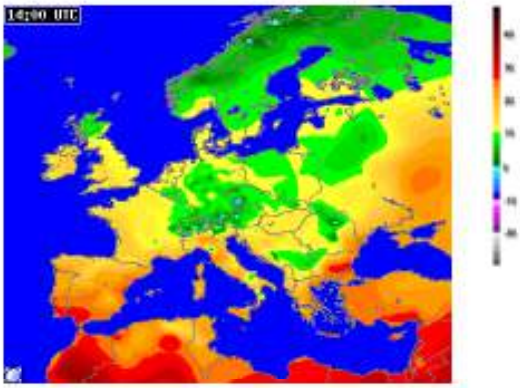


Temperature (ºC) 8/10/2011 08:00

Temperature (ºC) 8/10/2011 14:00



12h Precipitation (mm) 8/10/2010 18:00

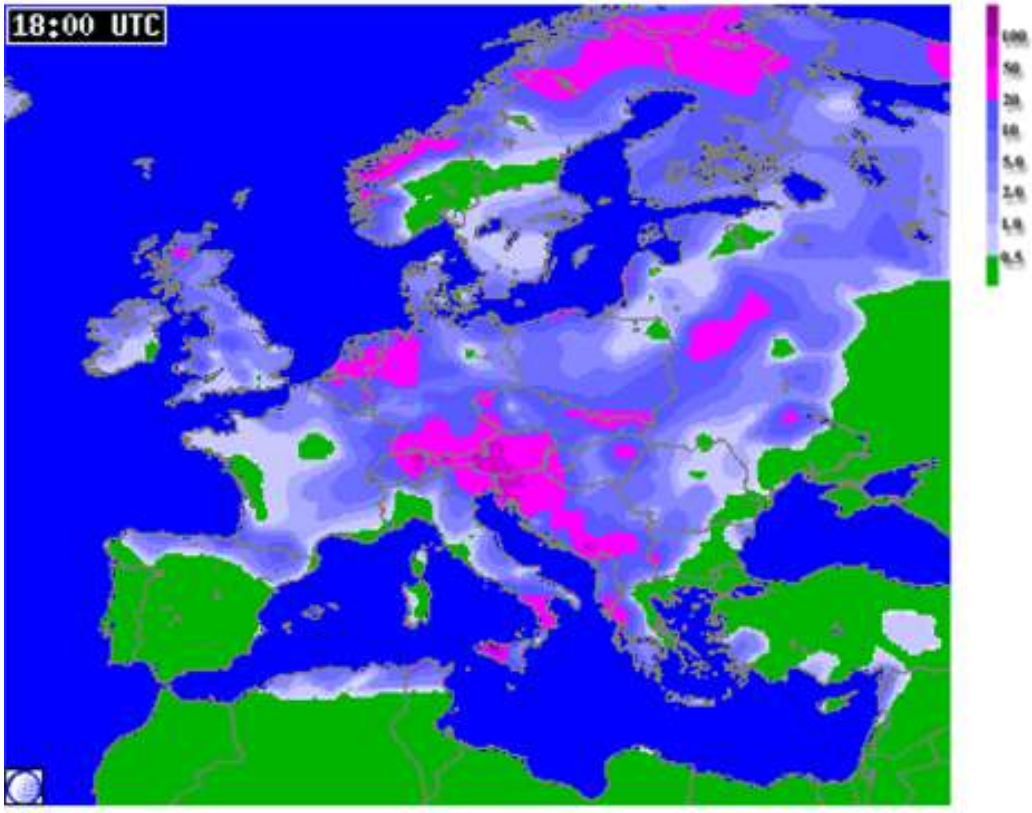


Figure 2: Changes in weather conditions (Humidity Precipitation and Temperature) in the Alpine range from the morning to the afternoon of the 8th October 2011. Source: www.wetteronline.at

2.1 Outlook for 2012

One of the points discussed during the Annual IBM Steering Committee held in Mallnitz (Austria) in November 2011 was to change the name of the Alpine Observation days. This was done in order to take into account the expansion of the project beyond the Alps, and therefore the adjective "Alpine" is not representative anymore. In 2012, the team of LPO-Grands-Causses (South of France, East of the Alps) has joined the IBM in the re-introduction and conservation of Bearded vultures, which becomes the only region of our network where the four species of European vultures (Bearded vulture, Griffon vulture, Cinereous vulture and Egyptian vulture) co-exist, and a potential stepping-stone between the Pyrenean and Alpine populations. Thus, the name proposed for the event from now on shall be "**Bearded vulture Observation Days**" instead of "Alpine Observation Days". Besides the colleagues in France, it is expected that in the future other regions outside of the Alps might join in the counting of Bearded vultures.

In order to get as much information as possible, the data collected one day before and after the focal date can be used in statistical analyses. During the meeting in Mallnitz, it was decided for future events to set the date on a Saturday if possible so in case someone cannot attend the gathering that day, it is also possible to do it the day before (Friday) or after (Sunday). Furthermore, the buffer period will be fixed from now on for a week after the focal date, in order to allow some flexibility for areas where the weather conditions have not been suitable in the focal date and observers are willing to participate the weekend after. Note that, however, only data collected during the focal date (and one day before/after) can be used for analyses, being therefore the rest of data collected used for guidance purposes.

In some areas of the Alps, there are other species of vultures (mainly Griffon vultures, but also Cinereous and Egyptian vultures in some cases) and other counting events are taken place focusing on these other species. The question to whether or not it might be interesting to join all counting events remains open since it is potentially very difficult and time-consuming to co-ordinate such work on the whole Alps moreover beyond that.

→ **NOTE**: For the current year 2012 the date suggested during the IBM Steering Committee for the **Bearded vulture Observation Days 2012 will be the 6th of October 2012**. The focal time for the count starts approximately at 11 AM (11:00) and lasts at least 4 hours until 3 PM (15:00). Only if weather conditions are extremely bad throughout most of Middle Europe, the IBM community might decide to switch the event to the alternative date on the 12th of October 2012. This information and the definitive dates will be announced on time by the IBM Administration.

3. Results

All information of the Observation sites and observations collected by the local administrators during the focal time on the local and regional level were sent by email to the IBM Administration to be merged on the entire Alpine scale. This information, plus additional data stored in the IBM data base collected in the same period, has been the basis for this report.

3.1 Monitoring effort

The distribution of the observation sites in the whole Alpine range during the 8th of October of 2011 is shown in the **figure 4**. In the whole period, a total of 635 (!) observers attended the event distributed in 466 different observation posts, out of which 381 (more than 80%) were used in the focal date (8th of October). This means a slight decrease in about 20 observation sites in relation to 2010; this can be explained by the weather conditions, since some areas that had a high level of participation last year couldn't be surveyed in 2011. When speaking about the four geographic regions in which the population nuclei are distributed in the Alps, it can be observed that the western regions (South-western and North-Western Alps) are the most thoroughly surveyed areas, with 3/4 of the observation sites, although the higher number of attendees was reached in the area of Lombardia (Central Alps) that gathered more than 130 observers (50% more than last year). The distribution of observation points and number of observers logically correlates with the climatic conditions, so it is not unexpected that the higher attendance levels were in the western regions, where the sunny weather allowed perfect observation conditions. These results contrast with those of the Eastern region of the Alps, where not many observers could attend this year due to the unsuitable weather (strong rain- and snowfall). A situation that was noticed in former years is the low number of observations in the western region of the Central Alps, which was originally attributed to a lack of observers, but furthermore, it has been perceived that not many vultures dwell this area. The overall result has been quite satisfactory, which is the outcome of a great coordination effort among several partners and the involvement of a significant number of trained observers, which has created a very effective and active monitoring network.

Figure 3: Weather conditions at the NW- Alps on the 8th of October © H. Hembert & E. Marlé

Besides the information of the situation of the Alpine population of Bearded vultures, the "Alpine Observation Days" (Bearded vulture Observation Days) have become one of the main tools at our disposal to raise public awareness. Therefore, most of the members (with higher or lower success) have done a big effort to spread the word in order to make the event a big success and motivate the participation of people interested in the species and in spending a pleasant day in the mountains. For this reason, there are some cases of areas where the presence of Bearded vultures is very low or even unrecorded, and still the event has been realized in a small scale to serve at least as a way to connect with the people; every new observer that shows interest and learn about the vultures in the Alps is an inestimable input for the project. As it was mentioned before, this year most of the partners have followed the advice to send coordinates of every observation site regardless of their success, which has contributed to get a more general impression of the area covered by observers.

This year a total of 634 observers (in reality there were more, but not every partner sent the information about the participants) divided in 466 observation sites covered during the whole observation period (7th to 16th October) an area of ~183.067km² (considering the four Alpine regions: eastern, central, north-western and southern Alps, controlled by the IBM). This means approximately one observation site per 360 km² which is equivalent to the approximate home range size of Bearded Vulture couples in the Alps.

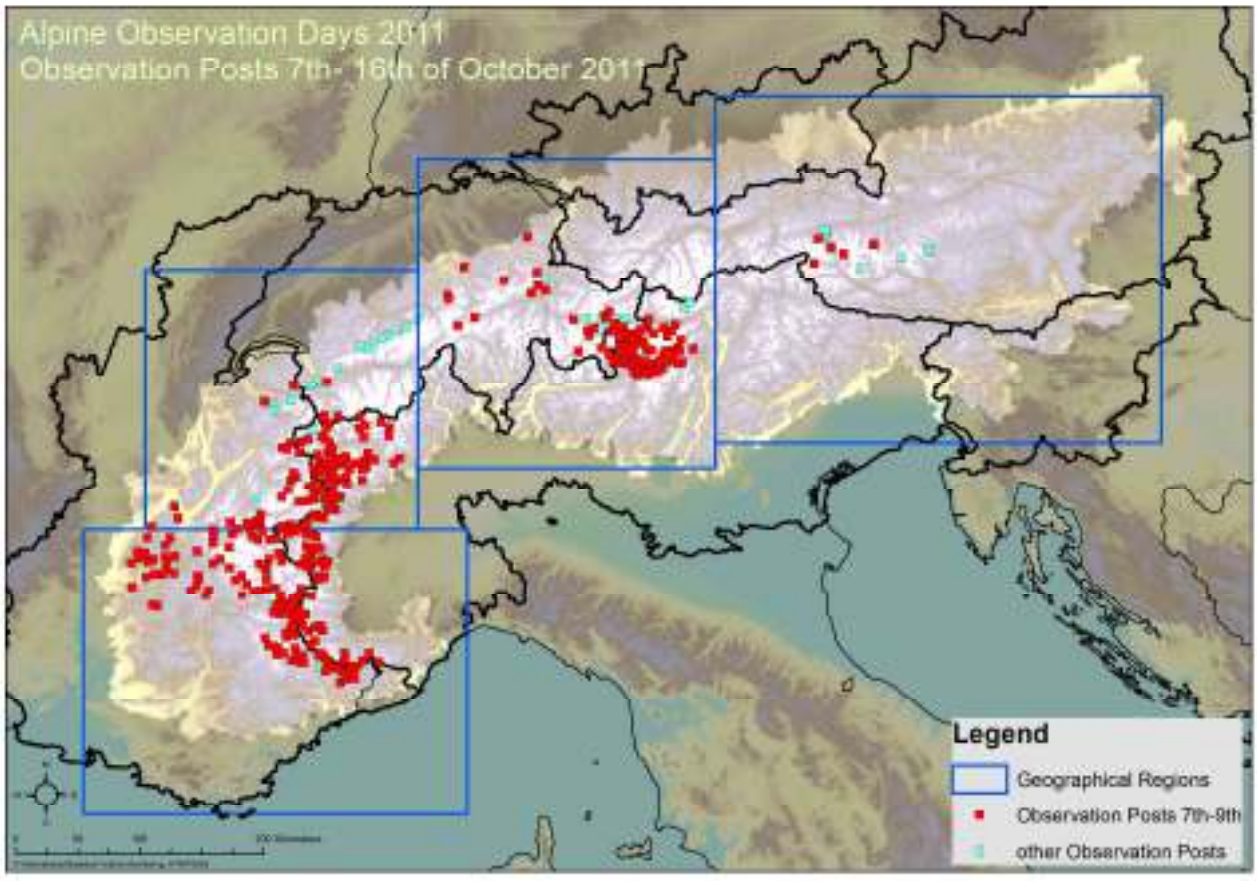


Figure 4: Observation sites on the Alpine Observation Days 2011 (8th October 2011). The red squares indicate the position of the observation points in the focal date (8th of October), and the blue ones during the buffer period (7th and 9th-16th October)

3.2 Distribution of birds

During the whole period reserved for the AOD 2011, a total of 239 observations were reported (including double counts), out of which 160 (approximately 2/3, 67%) were made on the focal period (7th- 9th of October). This results are slightly lower from those obtained in 2010 (248 in total) when looking at the general numbers, but it has significantly increased when focusing only in the focal date (94 observations in 2010), which means an increase of more than 58% in the number of observations on the focal period. The explanation of these figures is a combination of, once again, the good weather conditions that made flying conditions for the birds optimal, and the good organization of the local coordination of areas with high concentration of birds.

The resulting map with the distribution of observations is shown in the **figures 5** and **6**, displaying the sites where birds were observed just in the focal period (7th- 9th October) and in the whole period (7th- 16th October) respectively. In these maps, the observed birds have been clustered according to their potential capacity to establish a breeding unit; therefore, the birds have been considered separately in 3 groups: adults + sub-adults (older than 4 years) in one group, immatures + juveniles (birds younger than 4 years) in a second and finally undetermined age (unknown) in the third.

During the observation period, 50 satellite positions were received and stored in the IBM Data base, out of which 15 were taken in the focal period. These observations were not used on the overall counting since they were not part of the AOD as such, although they were used as an indication for identification of birds and to detect areas with monitoring deficiencies.

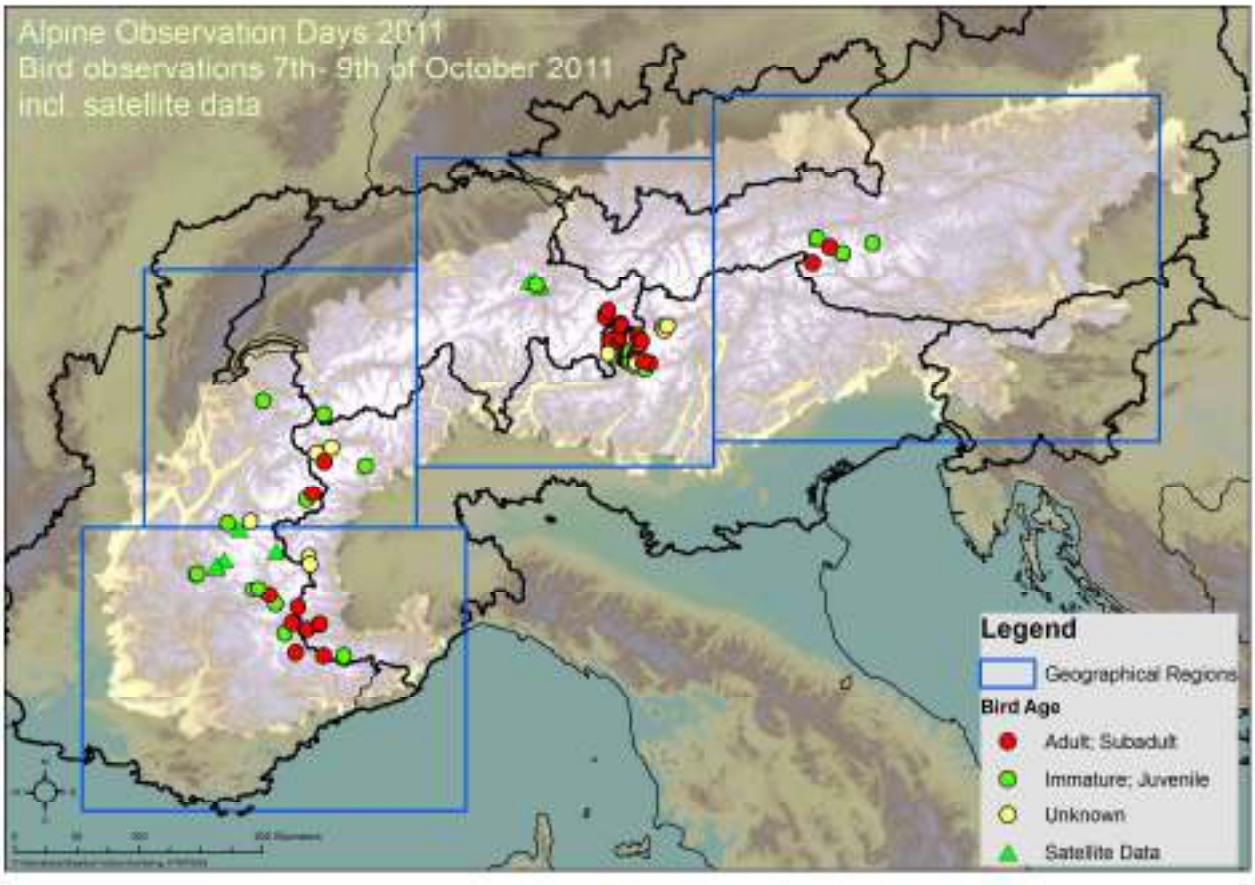


Figure 5: Bird Observations on the focus period (N= 160) of the Alpine Observation Days (7th-9th October 2011) separated by their potential capacity to establish a breeding unit, including satellite data (N=14)

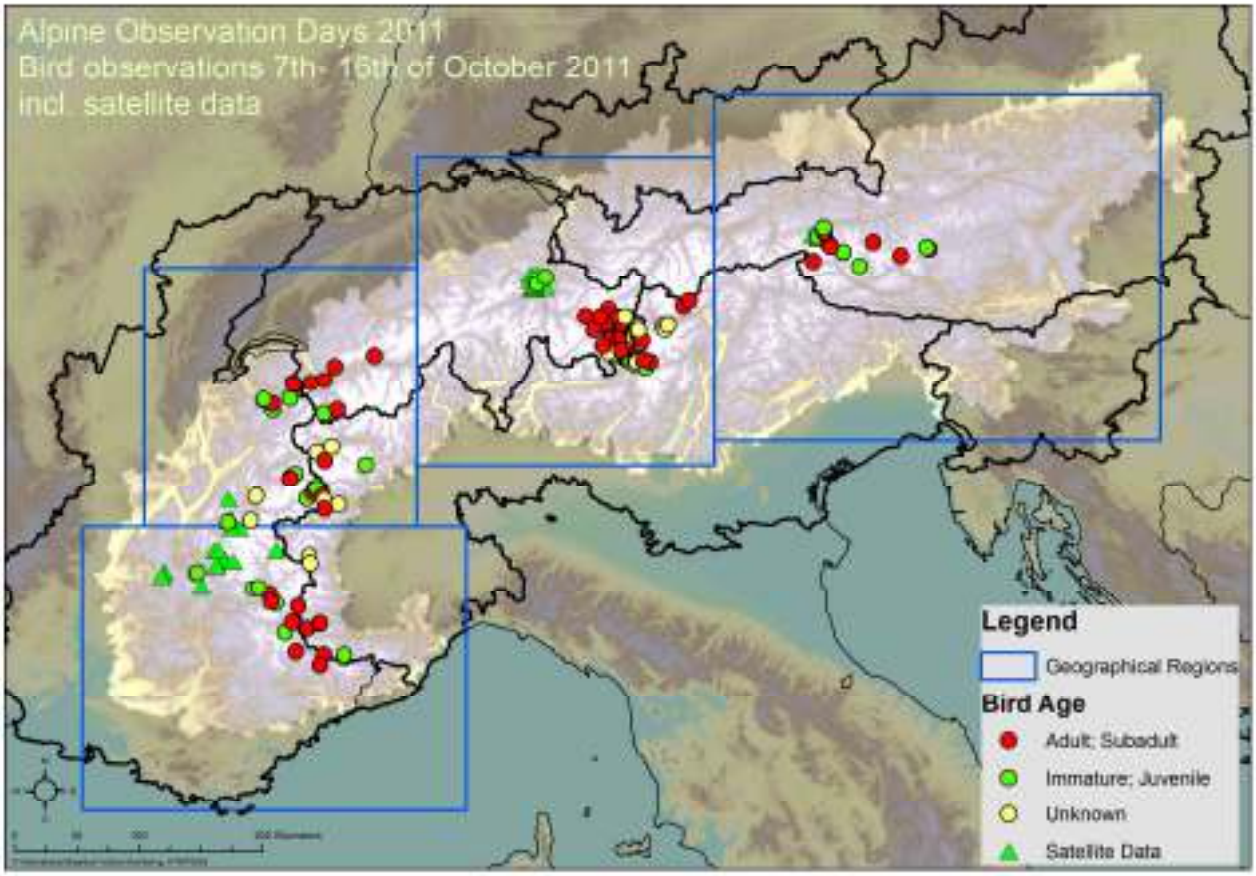


Figure 6: Bird Observations in the whole period (N =239) of the Alpine Observation Days (7th – 16th October 2011) separated by their potential capacity to establish a breeding unit, including satellite data (N=50)

3.3 Proportion of age classes

Out of the total number of observations reported in the whole period (8th – 16th October, N=239) of the AOD, the proportion of birds older than 4 years (potentially in age to settle down and establish a territory) encompasses almost 2/3 (63,18%, N=151) of the total number of observations. The rest of age classes, ranging from juvenile to immature, comprise a proportion of approximately 23% (23,01%, N=55) of the total number of observed birds. The remaining 14% (13,81%, N=33) correspond to the percentage of birds of unknown age that could not be identified due to unfavourable observation conditions (bad visibility, long distance, back light, etc.) or inexperience of the observers.

These results were compared to the expected number of living individuals per age class in 2011, calculated by using the demographic model designed by Schaub et al. (2009). According to this model, in 2011 the population of Bearded vultures in the Alps amounts to approx. 170 individuals; the percentage of birds older than 4 years (sub-adults + adults) would then be of 64,1% of the total, being the remaining 35,9% younger than 4 years (immatures and juveniles). In the whole period of the AOD, The percentage of birds older than 4 years observed correspond to 63,18% of the total number of observations, which fits quite well with the general fraction of adults in the population (64,1%). On the contrary, the observed proportion of birds younger than 4 years (21,25%) is rather low in comparison to expected (35'9%). This could be explained either by the difficulty of identifying the age in young vultures, meaning that most of the 14% of birds of unknown age would therefore be immature, but also by the

dispersive behaviour shown by the birds in their first years of life, which takes them to areas outside of the "hot-spots" more intensively surveyed, and even to regions outside of the Alps in some occasions (see the cases of the birds Sardona in 2011 and Jakob in 2012 that went to the Netherlands, or Maseta in 2010 that spent some time in the Toscana).

This year a minimum of 39 (!) individuals could be recognized, out of which at least 17-18 birds belong to known pairs. The average age of the mature individuals (adults and sub-adults) was of 12.2 years (4438 days) with the oldest bird, Balthazar (born in 1988), being almost 24 years old. The average age of non-mature birds (< 4 years old) is almost exactly 1 year (367 days).

Table 1: Age classes of the birds observed on the focus day of the Alpine Observation Days (8th October 2010)

Age	Observations	%
≥ 4 years	98	61,25
< 4 years	34	21,25
Indetermined	28	17,5
	160	100,00

Table 2: Age classes of the birds observed in whole period of the Alpine Observation Days (7th – 16th October 2011)

Age	Observations	%
≥ 4 years	151	63,18
< 4 years	55	23,01
Indetermined	33	13,81
	239	100,00

3.4 Counted birds

Although the total amount of observations gathered during the AOD can be used as an indicative of the presence of Bearded vultures in the Alpine range, due to the high mobility of the species it is not possible to use data from the whole week. Therefore, in order to avoid double counting only observations from the days 7th to 9th (focal period) have been used to determine a minimum number of birds observed in this period, not counting known territorial birds and couples that have not been observed in the focus day, in contrast to what was done in former years. Unfortunately, the deficiency of information from some areas, due mainly to bad weather conditions and lack of observers makes it unfeasible to envisage the whole population just with the data collected in the focus period. Nonetheless, the 160 observations reported were contrasted and analysed considering direction of flight (when provided), observation time, approximate flying distance and any other important information provided (such as distinctive marks on an individual) to establish a minimum number of 58 different birds. These results are shown in **figure 7** distributed per geographical region, together with the known territorial couples to serve as a visual indicative of the total distribution of birds, adding up to the information gathered on the focal period.

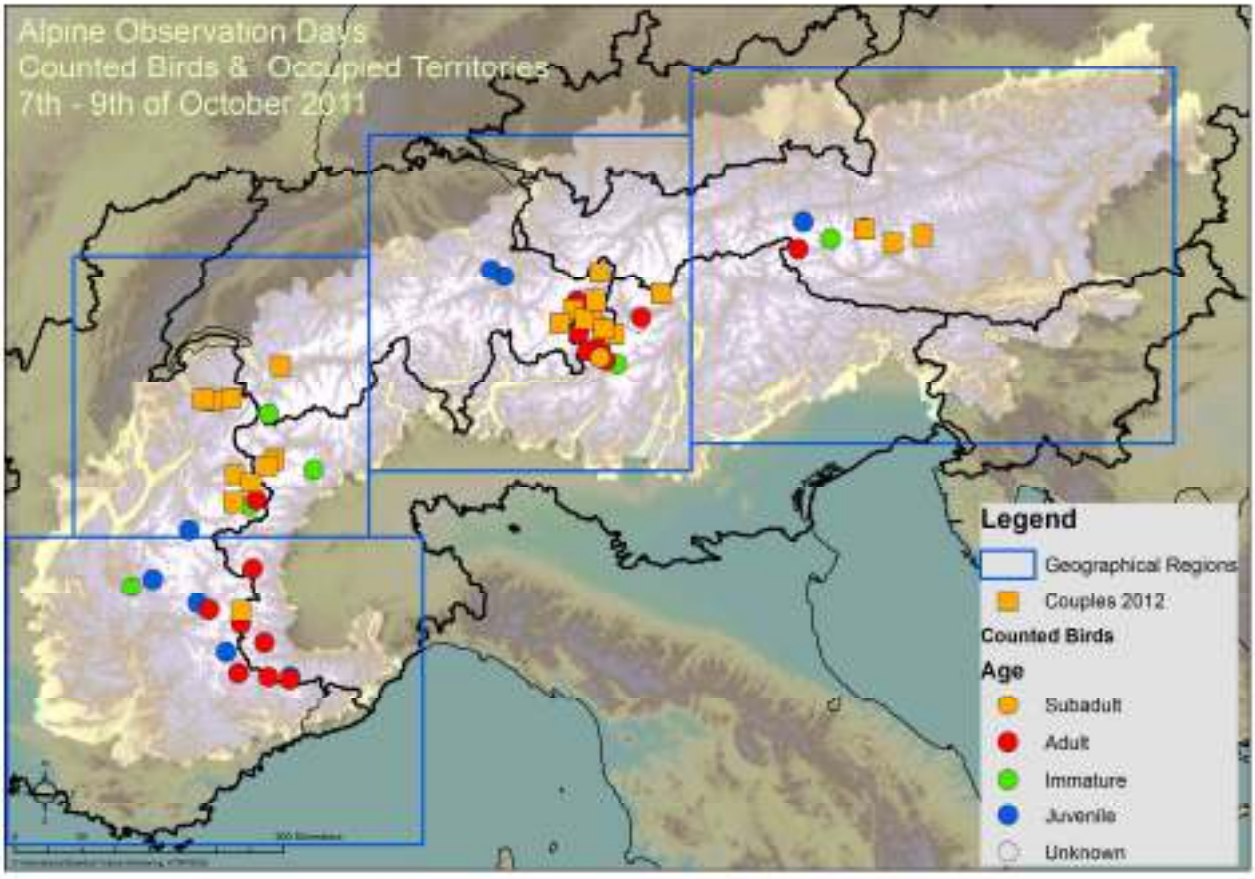


Figure 8: Bird Observations on the focus period of the Alpine Observation Days (7th -9th of October 2011) giving the number of observed birds (separated by age classes) per geographical region as well as the position of known breeding couples (not counted if not observed on the 8th).

The results are summarized in table 3, displaying the minimum number of birds per age class on each geographical region.

Table 3: Results of the number of birds in the AOD 2011 (separated by age classes) estimated per geographical region

	> 5 years	subadult	immature	juvenile	unknown	total
SW Alps	8	1	2	4	1	16
NW Alps	5	0	3	2	0	10
C Alps	16	1	2	6	1	26
E Alps	3	0	1	2	0	6
	32	2	8	14	2	58

The results obtained in 2011 are quite different from those of 2010, when the higher number of birds was observed in the NW Alps (18-19 in 2010) and the lowest in C- and E-Alps (7 in both cases), whereas this year the highest number of counted birds was obtained in the C-Alps (26) and the NW-Alps didn't obtain very good results in 2011 (10 birds). The results for the SW-Alps are more or less equal to those obtained in 2010 (16 this year and 14-15 in 2010). These figures can be easily explained when looking at the weather conditions during the focus day in the different regions; for instance in the C-Alps in 2010 there were very few observations during the focal date (16th of October), due to the hard conditions, whereas this year the weather was suitable and more than 130 observers participated in the event on the 8th of October.

When having a look at the number of birds differentiated on the focal period and the location of known territorial pairs (see **figure 8**), it is interesting and easy to appreciate that the results obtained for mature birds do not correlate with what would be expected in many regions. For instance, although in the NW-Alps there are 9 known couples (meaning 18 mature birds) there were only 5 different adults in the region confirmed during the focal date, which means that there are at least 13 more adults in the area (regardless of mature solitary individuals) that were not observed. The low number of sightings in this region in particular can be explained by the very harsh weather conditions they endured during the focal date. In the C-Alps the numbers of observed birds and expected birds are quite similar, and this region was intensely surveyed by a big amount of observers during the focal date. It is remarkable that in the SW-Alps the situation is reverse than in the NW-Alps, and although there's only one known territorial couple in the area, there were 8 different adult birds observed, which could be an indicative of the presence of more pairs unknown up to date. When considering these same suppositions for the whole range, the estimation is of approximately +17 adult birds (from the known couples) that have not been counted with data of the focal period (7^{th} – 9^{th} October). Summing up, in total the minimum number would be close to 50 adult birds in the Alpine range. According to the population model (calculated by Schaub et al. in 2009), out of the 170 birds expected for 2011, approximately 87 (51,2%) would be adult animals. Therefore, it can be seen that the approximation calculated with data from the AOD and territorial pairs is still far from the expected number of adults for about 37 individuals, which shows that there are still several areas with potentially unknown birds and couples dwelling.

It is obvious, summarizing, that the total number of birds in the whole Alpine range is not well represented by these results solely, so an estimation of the population based on the figures would prove unreliable and of little precision. It is thus necessary to work with all information available (such as observations stored in the Data base and precise knowledge of the Local administrators) to complete the overall picture.

3.5 Identified birds

As pointed out previously, during the whole period of the AOD 2011 (7^{th} – 16^{th} October) a total of 39 individuals could be identified, that is 67,24% of the 58 individuals differentiated in the focal period (7^{th} – 9^{th} October). Out of these 39 birds, 23 were identified during the focal period, whereas the other 16 were identified in the buffer period. These results are moderately higher than those of 2010, when 25 birds were identified (13 in the focal period 2010) in absolute terms, but it is also important to notice that in 2010 the total number of observations was higher than in 2011 (300 observations in 2010 and 239 in 2011), and therefore the relative number of identified birds respect the total is much higher (8,3% of total observations in 2010 and 16,32 % in 2011). A summary of the birds identified this year is shown in the **table 5**.

Out of the 9 birds released in 2011, 7 individuals could be observed and identified in the AOD this year, which is quite a good result; on the contrary, for birds released in 2010, only 3 birds out of 10 could be identified during the AOD 2011, and similar results have been obtained for birds released in 2009 and 2008 (respectively 0/4 and 1/6). The low number of re-identified juveniles of 2010 and immatures from 2009 and 2008 can be found in the dispersal behaviour of the young animals, which take them to areas of lower monitoring effort, and for birds in their 3^{rd} year of life to the loss of the marked feathers and consequent difficulty to identify them.

Table 5: Summary of birds identified within the whole period of the Alpine Observation Days 2011 (7th -16th October), separated in 2 groups (older than 4 years and younger than 4 years). In bold, birds member of a known couple

Birds < 4 years

n1	n2	Name	ID	Birth date	Age (days)	Age (years)
1	1	Clarins 2011	W85	24.04.2011	167	0,5
2	2	Cascade	W84	29.03.2011	193	0,5
3	3	Tantermozza2011	W95	27.03.2011	195	0,5
4	4	Jakob	676	24.03.2011	198	0,5
5	5	Smaragd	675	19.03.2011	203	0,6
6	6	Tussac	670	14.03.2011	208	0,6
7	7	Kruml2011	W86	09.03.2011	213	0,6
8	8	Nisa	666	09.03.2011	213	0,6
9	9	Madagaskar	665	06.03.2011	216	0,6
10	10	Tamina	669	04.03.2011	218	0,6
11	11	Italia 150	660	27.02.2011	223	0,6
12	12	Figol	628	16.03.2010	571	1,6
13	13	Kruml	w77	15.03.2010	572	1,6
14	14	Ingenius	621	06.03.2010	581	1,6
15	15	Sardona	624	01.03.2010	586	1,6
16	16	Pinzgarus	558	05.03.2008	1312	3,6
				Average:	367	1

Birds > 4 years

n1	n2	Name	ID	Birth date	Age (days)	Age (years)
1	17	**Rocca**	516	20.02.2007	1691	4,6
2	18	Doraja	465	13.03.2005	2400	6,6
3	19	**Hubertus2**	446	04.04.2004	2743	7,5
4	20	**Zebru**	W12	18.03.2002	3491	9,6
5	21	**Martell**	395	08.03.2002	3501	9,6
6	22	**Ambo**	392	27.02.2002	3510	9,6
7	23	Paolo Peila	388	21.02.2002	3516	9,6
8	24	**Diana-Stelvio**	W07	16.03.2000	4223	11,6
9	25	**Montblanc**	361	12.03.2000	4227	11,6
10	26	**Pablo**	359	04.03.2000	4235	11,6
11	27	**Sereno**	348	03.02.2000	4265	11,7
12	28	**Veronika**	321	22.02.1999	4611	12,6
13	29	Diana Valais	301	13.03.1998	4957	13,6
14	30	**Gildo**	299	23.02.1998	4975	13,6
15	31	**republique 11**	288	20.02.1998	4978	13,6
16	32	**Andreas Hofer**	260	26.02.1996	5703	15,6
17	33	**Assignat**	111	01.04.1989	8225	22,5
18	34	**Balthazar**	99	17.02.1988	8634	23,7
19	35	**GT 028**	GT 028	?	?	?
20	36	**GT015**	GT015	?	?	?
21	37	Adult (Neve)	-	?	?	?
22	38	**GT036**	GT036	?	?	?
23	39	Adult territorial Ubayette	-	?	?	?
				Average:	4438	12,2

When comparing these results with those obtained for 2010, it can be seen that there are 12 birds identified in 2011 that were not identified in 2010 (not counting the birds born in 2011). These are 1 juvenile bird (Ingenius), 1 sub-adult (Rocca) and 10 adults (Balthazar, Assignat, Republique 11, Diana-Valais, Veronika, Montblanc, Martell, GT028, GT036 and Zebru), which have therefore been re-identified in 2011. Furthermore, there are 11 birds that were observed in 2010 but not in 2011; these are 4 juveniles (Elena, Spelugue, Kira and Tschadin), 3 immatures (Tamina, Condamine and Girasole) and 4 adults (Roure, Louis, GT027 and Phenix Alp Action).

Table 7: Comparison of identified birds during the Alpine Observation Days 2010 and 2011; birds marked with an "x" have only been identified in one year.

Name	ID	2010	2011
Balthazar	99	x	1
Assignat	111	x	1
Andreas Hofer	260	1	1
Republique 11	288	x	1
Gildo	299	1	1
Diana Valais	301	x	1
Veronika	321	x	1
Sereno	348	1	1
Pablo	359	1	1
Montblanc	361	x	1
Louis	364	1	x
Roure	370	1	x
Paolo Peila	388	1	1
Ambo	392	1	1
Martell	395	x	1
Hubertus 2	446	1	1
Doraja	465	1	1
Rocca	516	x	1
Girasole	549	1	x
Pinzgarus	558	1	1
Ingenius	621	x	1
Maseta	585	1	x
Condamine	586	1	x
Elena	613	1	x
Spelugue	615	1	x
Sardona	624	1	1
Kira	626	1	x
Figol	628	1	1
Tschadin	629	1	x
Italia 150	660		1
Madagaskar	665		1
Nisa	666		1
Tamina	669		1
Tussac	670		1
Smaragd	675		1

Jakob	676		1
GT015	GT015	1	1
GT027	GT027	1	x
GT 028	GT 028	x	1
GT036	GT036	x	1
Phenix Alp Action	W01	1	x
Diana Stelvio	W07	1	1
Zebru	W12	x	1
Kruml	W77	1	1
Cascade	W84		1
Clarins 2011	W85		1
Kruml2011	W86		1
Tantermozza2011	W95		1
Adult (Neve)	-	1	1
Adulte territorial Ubayette	-	?	1
	Total:	**25**	**39**

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