



Introduction

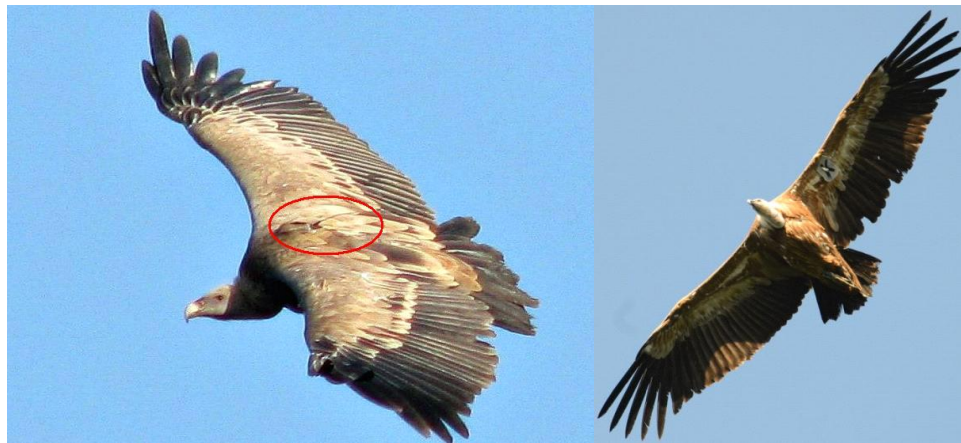
Marking of animals constitutes a basic method applied in the study of populations of different species of animals. This method allows for exact monitoring of all parameters of the given population and as far as some types of information is concerned this is the only way to establish facts. Marking and monitoring of strictly protected species is a legal obligation under the Law on the Protection of Nature and international conventions. Knowing the origin of individual animals enables detailed population studies and prevents trafficking of endangered species. By following the destinies of individual animals, we get to know the factors that impact them in nature and we also find ways to help them and increase their chances to survive. By marking individual animals, it is possible to following animal migrations and to manage populations of endangered species. Marking of animals provides the best results in the case of noticeable and long-life species with small numbers and with large radius of movement, as is the case with the griffon vulture. Marking of birds and monitoring the destiny of the recorded birds is an obligation in the programmes for protection and populating of vultures that have been implemented in the Balkans since 2004 and this allows for international cooperation in their protection. The report covers the year 2015, but it does not consider all the collected facts that are a part of the decades-long studies on this species in Serbia. The griffon vulture monitoring report also contains collected data on the black vulture, as its ecology is complementary to that of the griffon vulture and the protection of these two species is conducted through the same measure programmes. Both of the species have been covered by the European projects for the reintroduction of vultures in the Balkans, but the black vulture is a new species for Serbia. Since VCF is initiating a reintroduction programme in Bulgaria, we may expect a speedy return of this species to Serbia.



A conflict of a black vulture with a couple of golden eagles that met this species for the first time in Trešnjica (S.Malezić), Black vulture at the Uvac Griffon Vulture Restaurant (S. Preradović)

The history of marking and monitoring griffon vultures in Serbia

The ringing of griffon vultures started in Serbia in 1986 with the first marked bird using coloured anodized metal rings in four colours and the fifth basic colour of the metal. A limited number of combinations with 5 colours and using two feet did not provide the expected results. The marked birds could be identified only by a few associates in the know, because the rings could be seen only from direct proximity, most often at the vulture feeding ground (the Trešnjica restaurant was opened in 1989 and the Uvac restaurant was opened at the end of 1993) or when the bird would be handled by humans again thus making it possible to read the number. Since 1989, in addition to metal rings, the birds have also carried a wing marker with an identification code written on it. The wing markers have increased visibility and have enabled work from a larger distance, without the need to catch the bird again, as well as cooperation with more observers. The wing flags may also be seen by local residents, but we have rarely received accurate information from them. In the period of extensive marking and monitoring there were not enough findings needed for a proper monitoring of the griffon vulture population in Serbia in this manner. The small number of findings of marked birds was owing to a small number of observers in the Balkans in the 1990's, a small number of ringed birds and the small number of birds themselves, and therefore the results were significant, but modest. Plastic rings were introduced in Serbia in 2008. In addition to the two ways of marking, a third way has also been introduced. The plastic rings are less visible than the wing markers, but they are more visible than the metal rings and they are good in a combination with other markers. An easily noticeable code is written on the plastic ring which facilitates its deciphering and provides for a large number of combinations required for differentiating individual birds. In the case of a removal of a wing marker, the average life of which is 4 years, the only way to identify the bird are plastic rings, without any need to catch the bird again. There is a possibility of catching birds and reading the number from their metal rings which are a durable marker, thus being able to follow the destiny of the older segment of the griffon vulture population in Serbia.



Griffon vulture Konstantin **K** with an antenna protruding on its back (B.Rudić, S.Preradović).

A two-year old griffon vulture **K**onstantin with a wing marker K had a satellite platform placed on its back in 2011. The satellite monitoring helped increase the quantity and quality of data, but it was stopped last year. These types of monitoring have allowed us to learn about the habits of the griffon vultures from Uvac and to earmark important areas for their protection and return. The starting of the programme "Return of the griffon vulture *Gyps fulvus* to Popovo polje in Herzegovina" also meant the starting of the mandatory marking of the

strictly protected species, the griffon vulture, under the Law on the Protection of Nature, Art. 93, paragraph 1, point 2 (The Official Gazette of the RS, no. 36/09, 88/10 and 91/10), which stipulates that the individual of an endangered species that has been held, but originates in nature, must be duly marked and recorded with a chip installed under its skin. This is yet another way of durable marking, useful for monitoring which is absolute, and it also important for the public records related to the countering of international trafficking, as well as to the obligations stemming from the signed international CITES convention. The international control of the origin of individuals of endangered species allows for the monitoring of their movements while held in captivity and is being implemented in order to prevent illegal acquiring of animals from nature or introducing allochtonic populations of invasive species. By imprinting an identification number that cannot be taken off or replaced, the complement services may issue the documents necessary for the legal trade of protected species.



Griffon vulture Pavaroti **1**, After its longer stay in Bulgaria, he had his photo taken in the Italian Alps (Fulvio Genaro). Griffon vulture Srba **22** on his return trip from the Alps via Istria and Cres (Croatia) (Massimo Grion).

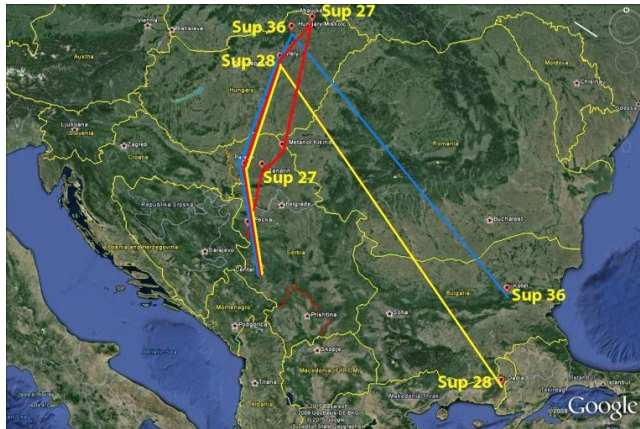
Since 2004, the work on the ringing of birds has been intensified with a larger number of participants and marked birds per season. A support was provided by the Student Speleological and Alpinist Club (ASAK) from Belgrade and a little later we were also joined by the Speleological Society Ponir from Banja Luka (Bosnia and Herzegovina). The intensified work on the marking of birds reflected that same year on an increase in the number of sightings of marked birds from Serbia abroad (emigrants). Nowadays, there are centres being opened in the Balkans which regularly and in an organized manner monitor vultures visiting the feeding grounds. These centres have become well known destinations for our young griffon vultures: island of Cres in Croatia, Dadia in Greece, Riserva Naturale Lago di Cornino in Italy, Madzharovo, Kotel, Kresna Gorge and Vratsa in Bulgaria, which has enabled a control of birds in the Balkans. In Europe and in Israel, monitoring has been organized since the 1980's. This year, first griffon vulture observers appeared in Turkey. Turkey is the space where griffon vultures move on their way from Serbia to Israel.



A photo trap has recorded griffon vulture **33** at the griffon vulture feeding ground at the Kresna Gorge Reserve in Bulgaria (Emiliano Stoykov Fund for wild flora and fauna Bulgaria).

Since 2008, we have started using digital photography which enables easier monitoring and taking photos of birds, and this was also when interest in the griffon vulture started to emerge among photographers from Serbia. Enthusiast-associates started to get involved in the monitoring of griffon vultures, thus increasing the number of sightings of birds marked in Serbia (loko), as well as of birds marked abroad but seen in Serbia (immigrants). After the shutting down of the video surveillance equipment at the Uvac feeding ground, photography has become the way for collecting information on marked birds. With the contacts that we have through the Vulture Conservation Foundation, we have established cooperation with a network of vulture observers in the Balkans and by using a speedy exchange of information through internet, we can sometimes observe flying routes of individual birds or even of an entire flock in a relatively real time period, as was the case in Hungary this year. In addition, this year we managed to mark 15 griffon vultures, which is a half of the capability of the group for the marking of vultures. In the report we have prepared, we used the collected data, photographs and information obtained through an exchange with the centres for the monitoring of vultures in Europe and in the Middle East.

In addition to the photographs of marked griffon vultures, we also collect photographs of the black vulture, as well as information on their sightings. Through photographs it is possible to establish the identity of individual black vultures using damages in the flying feathers as guidance. There are only a few dozen black vultures in the Balkans and in this way it is possible to differentiate individual birds. The goal of the Birds of Prey Protection Foundation is to use its reports to bring these researches closer to the public and to bring together ornithologists, amateurs and especially photographers in order to use joint engagement for a successful implementation of the programmes of returning the griffon vulture to Trebinje (Bosnia and Herzegovina) and to Stara Planina (Serbia).



Three birds in a flock of 11 griffon vultures seen in Hungary had markings pinned at Uvac this year, **28**, and **27**, while Griffon Vulture **36** was photographed in Kotel after its return from Hungary.

Monitoring of the griffon vulture

Griffon vultures have been sighted 1712 times in Serbia so far, out of which number 648 have been sighted in 16 other countries. The video surveillance equipment at the Uvac restaurant enabled a perfect control of the marked birds in 2009-2010 and it collected 359 findings of marked birds within 80 days. Since 2011, we have been using monitoring of birds at resting points and a photo-census, most often by the feeding ground.

The birds marked at Uvac have been sighted this year at the Massif Central in France, in the Alps in Italy, and in Istria and Cres in Croatia, while an entire 11-strong flock cruised in Hungary. The griffon vultures from Serbia are frequent guests in Bulgaria and Greece, while a sighting in Turkey was a rare event. Out of 219 griffon vultures marked so far, 87 different marked birds were identified in 2015 within the scope of 213 sightings. Marked birds were recorded 157 times in Serbia, out of which in 132 cases with our markers (loko), that is, 59 different individuals originating from Uvac were identified. A number of marked birds have vanished, but on an average around 75% of marked individuals were sighted in the following year as well. Nine of this-year's hatchlings were spotted in other countries, as well as five of the last-year's ones, one three-year old bird and two four-year old birds. Griffon vulture Fransoas **F** was the first one from Uvac that has flown over the Alps and he was sighted in France. Fransoas is 7 years old and it is time for him to nest, so it will be interesting to see if he will manage to return to Uvac or if he will build his nest far from his homeland colony. Our oldest sighted markers were placed in 2004, but their inscription is illegible, so we can only establish the generation in which they hatched, on the basis of the either their left or their right winged marked. The readable marker **W** on an 8-year-old griffon vulture was

recorded by Saša Malezić. This bird had not been sighted anywhere since 2010, so we thought it had fallen out of the population. Griffon vulture Hađi Jovan **16** that had been monitored for quite a while by our Israeli colleagues returned to Uvac after 5 years. He headed towards Israel just before the conflict in the Middle East, in September 2014, and then Brano Rudić took a photo of him at Uvac already at the beginning of January. Birds with foreign markers were recorded in 25 cases (immigrants). The sightings referred to 17 different individuals, at least five of which nest at Uvac. This year we haven't had sightings of our birds in Israel, since griffon vultures avoid areas impacted by war conflicts. Four griffon vultures with Israeli markings probably just passing through have been recorded, **P41** and **E32**, as well as without a marker but with rings – **G1**, **E69** and **E19** and **HB**. Five birds with markers **J91**, **Y40**, **G51**, **A77** and **Y30** have been caught in a trap in Israel and marked with Israeli markers. In Serbia, these birds exhibit multiannual resident behaviour. A 4-year-old griffon vulture with an Israeli ring **X28** has still not made up its mind and we are not certain of its origin.



El Greco **0** with a Greek marker from 2003. A griffon vulture over 10 years old with a metal ring that may be read only by using a trap (S.Preradović). Griffon vulture Hađi Jovan **16** after his return from Israel (B.Rudić).

Saša Preradović managed to record El Greco **07** which had a ripped off marker, with only **0** remaining, caught by a trap in Greece on 29 October 2003. It obviously comes from Trešnjica, since it's been nesting there for 5 years now. It stayed in Greece until 2008 and had been caught twice by a trap. On 17 April, Saša Preradović recorded at Trešnjica the last of the Spanish vultures, one with a plastic ring **G47** being an adult bird we have been observing at Uvac and Mileševka since 2010. It will probably stay there, while the other one with a wing marker **K42** was killed in a traffic accident a week after Trešnjica at Peštera. Since 30 June, a griffon vulture with a Bulgarian wing marker **B64** has been sighted at Uvac. It was caught in a trap near Kotel in eastern Bulgaria on 22 October 2013 and it may happen that it was in fact our migrating bird caught by the trap there.



The last Spanish vulture **G47** in Serbia and the Spanish vulture **K42** killed in a traffic accident photographed a few days before its demise (S.Preradović).

Our birds were recorded in other countries 56 times, that is, 23 different birds were observed out of which 11 were not observed in Serbia this year. What stands out in this is the first sighting of Uvac birds in France and this refers to the bird with the wing mark **F**, as well as sightings of our griffon vultures in the Italian Alps. On his flight back from the Alps, griffon vulture Srba **22** passed by Učka in Istria and went down to Cres. From the islands of Kvarner in Croatia, he continued for 955 km more, which he covered in two days going to Bulgaria and we still don't have information as to whether he has returned to Uvac. A flock of 11 griffon vultures from Uvac visited Hungary at the end of September and this caused great excitement among bird lovers there. This was the first flock of griffon vultures to appear in Hungary after 1926 and was treated as the first-rate event in the Hungarian ornithology this year, thus getting a significant media attention. The flock included three birds marked this year in the nests at Uvac. The flock eventually split up in the north of Hungary and each marked bird chose its own direction. Griffon vulture Jožef **28** went immediately down to Greece, while griffon vulture Ištvan **36** wandered a little around Hungary, then flew to Kotel, Bulgaria, not far from the Black Sea. Only griffon vulture Atila **27** who flew to the Slovakian border and place Abaújkér did not quite manage and stayed in Hungary for too long, more than two weeks, as there is no available food for griffon vultures there. Although this species has the ability to go hungry for a longer period of time, griffon vulture Atila got too hungry and therefore by flying low over the roofs of Kikinda and Temerin he went back directly to Trešnjica, i.e., to Pecka. Dragan Đeković, a ranger from "Klisura reke Trešnjice" Reserve picked him up and measured him. He weighed only 5.2 kg, which is the survival limit of this species. With the help of veterinary Bogdan Šojić, he is currently recuperating at the Centre for the Birds of Prey at Uvac where he will be released after being chipped. At the end of the summer Brano Rudić managed to record griffon vulture Konstantin **K** who was still carrying the satellite monitoring antenna. Griffon vulture Uroš Nejaki **U** had his outdated marker changed after he had returned from Poland. Instead of marker **U**, he was marked at the opposite wing using marker **9** in order to extend the monitoring of this interesting bird with its own particular history. On release, the rangers took off his wing marker **9** and thus the bird became invisible to us and we could no longer follow what was happening with it. Still, Saša Preradović succeeded at finding him at the Uvac restaurant, documenting him by a photo, and we managed to identify him on the basis of the plastic ring **S033** he is wearing on his leg.



Griffon vulture Uroš Nejaki **U** (V.Luskovec 2011.), ring **S033**, marker **9** is missing on his right wing (S.Preradović 2015.).

On 24 September, the Institute for Nature Conservation of Serbia picked up a griffon vulture near Dragačevo and transferred it to the Centre for the Protection of Birds of Prey at Uvac, where it should be marked in compliance with legal regulations. One young griffon vulture was left exhausted at the feeding ground at the

Uvac Reserve on 1 October, without the necessary help from the management of SRP Uvac, so it most probably did not survive. The bird was photographed by Viktor Luskovec who informed the management of SRP Uvac to move the griffon vulture to the Centre for the Protection of Birds of Prey Uvac. The bird was weak and exhausted, so it had no fear of humans and could be easily caught. The Centre for the Protection of Birds of Prey is in a very bad shape and does not have basic conditions for the keeping of birds of prey, and has not served the function related to the control and protection of birds since 2013.



Griffon vulture Vukan is the first bird from the programme for the return of the griffon vulture that was moved from SRP Uvac across the border with Bosnia and Herzegovina to the Centre for the Populating of the Griffon Vulture, Sedlari in Popovo Polje. The Institute for Nature Conservation of Serbia supported this international programme and as the Administrator of SRP Uvac it also approved the transfer of Vukan. The Institute for Biological Research has filed a request for the transfer of another griffon vulture, Cile, to the Republic of Srpska. The conditions for the populating of the griffon vulture at Stara Planina have been awaited for six years now, before the Institute for Nature Conservation of Serbia can transfer them there.

<i>Gyps fulvus</i>							<i>Agypius monachus</i>	
No.	observer	loko	immigrants	observer	country	emigrants	observer	no.
1.	Saša Preradović	47	19	WWF Greece Tim	Greece	26	Brano Rudić	3
2.	Brano Rudić	39	3	Fund for wild flora and fauna Bulgaria	Bulgaria	14	Irena Hribšek	3
3.	Saša Marinković	8	1	Péter Borbáth	Hungary	6	Saša Preradović	1
4.	Viktor Luskovec	5	1	Fulvio Genaro	Italy	3	Predrag Kostin	1
5.	Predrag Kostin	5	1	Majercsák Bertalan	Hungary	3	Nenad Dučić	1
6.	Irena Hribšek	4		Robert Straughan	France	1	Milivoje Vučanović	1

7.	Milka Stojanović	4		Zalai Tamás	Hungary	1	Ljubivoje Vranić	1
8.	Vladan Vučković	3		Şebnem Samsa	Turkey	1	Nenad Dimitrijević	1
9.	Ljubiša Simović	3		Dijana Župan	Croatia	1		
10.	Viktor Sabo	3		Massimo Grion	Croatia	1		
11.	Nenad Dučić	2						
12.	Miloš Karaklić	2						
13.	Milivoje Vucanovic	1						
14.	Zoran Karić	1						
15.	Ištvan Balog	1						
16.	Boris Stanojević	1						
17.	Saša Malezić	1						
18.	Dragan Džeković	1						
19.	JelenaMitrašinović	1						
No.	of findings Σ	132	25			56		12
No.	of individuals Σ	59	17			23		1

Tabela: monitoring lešinara u 2015.

Table: Number of findings of our birds locally, of immigrants with foreign markers and of emigrants or our griffon vultures abroad, and the number of identified different individuals within all three categories, as well as the findings of the black vulture.

Monitoring of the Black Vulture in 2015

When the flock of griffon vultures at Uvac reached the level of around 150 couples (2010), individual black vultures, *Aegypius monachus*, started to appear in Serbia. The big flock of griffon vultures goes up to the heights of around 3000 m and when the weather conditions are good, it may be seen throughout the Balkans. This flock is a good sign for the black vulture that there is food for him, too. This year, a fourth young individual black vulture appeared in Serbia. A week later, he was photographed by a photo-trap at a feeding ground in Bulgaria. Irena Hribšek spotted the black vulture at Trešnjica, at the time of the traditional visit to that colony on 9 May. Saša Malezić documented this finding by photographs. Already at the end of May, the black vulture appeared at Uvac where he stayed until the time when this report was being prepared. It is possible to hear rangers at the Uvac Reserve saying that they have observed two black vultures, but have not documented the finding. An analysis of the available photographs of the black vulture made by different authors in different periods confirms with certainty that this was all one and the same bird. The arrival of the black vulture underlines the importance of implementing the programme of measures for the control and protection of the griffon vulture at SRP Uvac, since it enables a spontaneous return of the black vulture to Serbia after more than 60 years.



Damages to the flying feathers in big birds are like a fingerprint and may be used for the identification of the black vulture; the photo on the left-hand side by P. Kostin taken on 9 June and on the right-hand side by B. Rudić taken on 30 August show that the photos were taken of the same bird.

Participants in the Vulture Monitoring Programme in Serbia

The implementation of these researches has been made possible by DPS Chromatography and the Institute for Biological Research “Siniša Stanković,” of the University in Belgrade. In the last four years, with major efforts, we have managed to ensure a continuation of the decades-long demographic monitoring of the griffon vulture and we have provided a minimum for ensuring continuity in the implementation of the monitoring standards. Support of the friends of the programme for the monitoring of vultures has made it possible to continue the project primarily as regards the marking which was supported by DSP Chromos. With their efforts, the monitoring of the griffon vulture in Serbia has been supported by our colleagues, members and friends of the Foundation whom we are not naming here, but who we want to thank on this occasion. The goal of the report is to justify their trust and to convince them to continue aiding this specific and attractive monitoring of vultures in Serbia.

The state stopped co-financing the griffon vulture monitoring programme in 2011 by closing the Fund for the protection of nature of Serbia, which decreased the quality of work, but it did not stop supporting the implementation of the griffon vulture monitoring programme issuing operating permits to the Birds of Prey Protection Foundation. Owing to the lack of funds, we turned off the video surveillance at the feeding ground for griffon vultures and the satellite monitoring was also stopped, while the Centre for the Protection of the Birds of Prey does not function any more for the purpose of admitting birds and controlling the population. The scarce funds we have available for the implementation of the programme and their uncertainty, together with the economic crisis, have made us pull up our ranks in order to maintain the quality at a valid level which is required for the work and cooperation with the European programmes for the return of vultures to the Balkans. During this year, we had cooperation with 18 organizations and reserves for the protection of vultures in other countries. In addition to the 10 associates listed in the table, we would like to emphasize our cooperation with Fulvio Genaro, dr Goran Sušić, Theodora Skarts, Emilian Stoyanov, Hristov Peshev, Ohad Hatzof and Ido Shaked. Our researches involved 11 alpinists, 9 ornithologists, 4 of whom were the bird ringers, and 10 photographers who made the monitoring of griffon vultures in 2015 possible.



The griffon vulture that did not receive aid at the feeding ground at the Uvac Reserve, 1 October (V.Luskovec).

The programme for the protection of the griffon vulture has shown the best results in the Balkans, since for a number of years it had general support and excellent cooperation with SRP Uvac and its rangers. Since 2013, there has been a sudden lack of understanding for these researches and negation of its importance for the protection of the griffon vulture and the reputation achieved by the Uvac Reserve. The new Administrator of SRP Uvac has endangered these researches by violating the Law on the Protection of Nature, by not allowing marking of individuals and by releasing birds without the marking which is mandatory under the law, while taking markers off birds while they are in the cage, thus also endangering the work that has been done so far regarding the implementation of the last valid method we can use in order to monitor changes in the population of the griffon vulture at the Uvac Reserve. The basic purpose of the Centre for the Protection of the Bird of Prey at the Uvac Reserve has been changed and nowadays the birds are kept at this Centre without proper conditions. The Centre for the Protection of the Birds of Prey has been envisaged as the central place for the control of the griffon vulture population at Uvac, but it provides no longer any assistance even to the birds that need it in order to survive. We have also collected a DNA database required for genetic monitoring of the griffon vulture population in order to have better quality management of the Uvac population and to implement the resettlement programme, but without the support from the state, the reach of these researches will stay limited.



Participants in the 2015 griffon vulture marking programme. Alpinists: Željko Rogić, Vladimir Krželić, Milena Gavrilović, Zoran Novaković, Đorđe Šandalj, Đorđe Sebeš, Jelena Petrović, Goran Dujković, Nada Ćosić, Medan Dejan, Stefan Anđus, bird ringers: Irena Hribšek, Saša Marinković, Milovoje Vučanović, Zoran Karić, and photographers: Predrag Kostin and Boris Stanojević.