

Status and Conservation of the European Black Vulture *Aegypius monachus* in Europe

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ABSTRACT

Since 1984, when the population of Black Vultures in Europe was estimated at less than 300 pairs, a spectacular recovery has taken place in Spain where 1,334 breeding pairs were recorded in 2001. The main reasons for the recovery has been the reduction of various threats, including prohibition of the use of poison for predator control and protection of most breeding areas. The Black Vulture is now extinct in most of the other countries within its historical distribution range. Only one colony is left in the Balkans, in the Dardia Forest Reserve in Greece, and there are some generally declining colonies in the Caucasus. The total European population is now estimated at 1,456-1,489 pairs, of which 92% are in Spain.

Conservation results achieved for the species in Spain show its capacity to respond to integral species and habitat protection. The conservation experience of Spain and western Europe in general is now being applied to the eastern part of the European population.

The Black Vulture Conservation Foundation (BVCF) has been working since 1986 to re-establish a continuous population in the species' former European distribution area, by connecting the separate populations of Spain in the west and the Balkans in the east. Conservation of existing colonies is supported and re-stocking or reintroductions are carried out where the causal factors responsible for the population decline have been removed.

DISTRIBUTION

The distribution of the Black or Cinereous Vulture *Aegypius monachus* ranges from Spain and France in western Europe through the northern Mediterranean, Transcaucasian countries and Russia, Central Asia, Turkey, Iran, Afghanistan, the northern part of the Indian subcontinent, Mongolia and

South Siberia, as far as China in the east (Cramp & Simmons 1980; Del Hoyo *et al.* 1991; Ye Xiao Ti 1991). In Europe, the Black Vulture is extinct in most of its former distribution areas: In Slovakia two nests were last found in the middle of the 19th century in the High Tatra (Glutz *et al.*, 1971). From the southern Austrian Alps breeding was known until the end of the 19th century from three sites (Glutz *et al.*, 1971). In Poland it nested probably until the 19th century in the Tatra mountains (Cramp & Simmons 1980). On the Italian mainland it became extinct in 1950 (Heredia 1996), while it disappeared on Sardinia in the 1980s (H. Schenk, pers. comm.). It bred in Serbia until 1956 (Grubac 1998a) and in Montenegro to the end of the 19th century (Cramp & Simmons 1980). In Macedonia the species still bred on several mountain ranges until the beginning of the 1980s, last proven breeding being from 1988 (Grubac 1998b). In Albania it is considered to be extinct although survival is possible in the remote northern and eastern mountain ranges (Lamani 1998). In Romania it bred in the Carpathian mountains and was abundant in the Dobrogea with over 100 pairs in 1911, which by 1950 had decreased to 10-12 pairs, last breeding in 1964 (Glutz *et al.* 1970; Ciochia *et al.* 1998). It is considered to have become extinct in Croatia at the beginning of the 20th century (Susic 1998) and on Cyprus in the second half of the 20th century (Cramp & Simmons 1980). In Moldavia (former USSR) it has been extinct since 1929 (Meyburg & Meyburg, 1984).

The Black Vulture survives only in Spain in the west and, in very small populations, in Greece, the Ukraine (Crimea) and the Caucasus (Georgia, Armenia and Azerbaijan) in the east. In France, the species was extinct since the 18th century and has been reintroduced, with the reintroduction project starting in 1992 (Tewes 1996a; Tewes *et al.* 1998).

STATUS AND TREND

In the 1970s and early 1980s, the Black Vulture had decreased to its lowest number of individuals. In 1983, the total European population was estimated to be less than 300 breeding pairs (Meyburg & Meyburg 1984), most of them located in Spain (Bijleveld 1974). Since then a recovery has taken place in the species' western range, whereas it continues to be extremely threatened in the east. Several articles from about ten years ago document this development: Tewes (1996b) gave a total of 1,330-1,743 breeding pairs in 1993/94 in Europe. L.M. Gonzalez in Tucker & Heath (1994) estimated 1,000-1,500 pairs in Europe and Heredia (1996) calculated 1,329-1,873 breeding pairs, all three authors including Turkey with the rough estimate of 100-500 pairs.

In 2003, the Black Vulture was estimated to number 1,456 to 1,489 breeding pairs (Table 1) in Europe (not including Turkey), with 92 % of the European population located in Spain, indicating a steady increase on the continent due to the general recovery in the west despite the general decline or stagnation in the east.

In France the reintroduced colony has been reproducing since 1996 (Tewes *et al.* 1998), increasing to ten breeding pairs in 2003 (M. Terrasse, pers. comm.). In Portugal in recent years breeding attempts occurred close to the Spanish border area and in 2003 one pair bred successfully in Sierra de Malcata and another pair started breeding at the Tajo river (S. Infante, pers. comm.).

Status, threats and the conservation situation vary greatly from one country to another on the Balkan Peninsula. Here, the last stronghold of the species is in Greece, with a colony in the Dadia Forest Reserve comprising 19 breeding pairs in 2003 (T. Skartsi *et al.* 2003), which now seems to be stable after an increase from about 15 pairs during the 1980s (Spiropoulou 1998; Hallmann 1998). In Albania it is not at present known if the Black Vulture still survives in any of the mountain ranges (Lamani 1998; Hallmann 2003). In Macedonia the population has been reduced to only one individual, although some observations indicate that there might be others (Grubac 1998; Stoynov *et al.* 2004). In Bulgaria one Black Vulture pair nested in 1993 and 1994 in the Eastern Rhodopes (Marin *et al.* 1998; Simeon Marin, pers. comm.). In 2003 another pair bred successfully in the same region (H. Hristov, pers. comm.). The species uses the feeding places there regularly, and up to 16 birds roost together (BSPB/BirdLife Bulgaria 2002). The number of pairs in the threatened Crimean colony was estimated to range between three and five in 2003 (Osipova *et al.* 2003). From European Russia, Galushin (1998) estimated a total of 50 pairs in 1993 on the northern slopes of the Caucasus ridge, where the trend seems to be stable (V. Moseykin, pers. comm). In the Transcaucasian countries, small colonies still survive: there are estimates of 20 -30 pairs in Georgia (Gavashelishvili pers comm.), seven pairs in Armenia (Ghasabian 2002) and 10-30 pairs in Azerbaijan (Sultanov 2002).

Table 1. Black Vulture range countries, population size now and about ten years ago and trends.

Country	Nr. pairs	Year	Nr. pairs	Year	Trend
Macedonia	1-2? ¹³	1993	0-1? ¹	2003	↓
Bulgaria	1 ¹⁴	1993	1 ²	2003	→
Greece	15 ¹⁵	1993	19 ³	2003	↑
Ukraine	3-6 ¹⁶	1987-1990	3-5 ⁴	2003	→
Armenia	15-25 ¹⁷	1993	7 ⁵	2002	↓
Azerbaijan	100 ¹⁷	1993	10-30 ⁶	2002	↓
Russia	50 ⁷	1993	50 ¹²	2004	→
Georgia	17-19 ¹⁸	1991	20 -30 ⁸	2001	→ ²²
France	0 ¹⁹	1993	10 ⁹	2003	↑
Spain	1027 ²⁰	1993	1.334 ¹⁰	2001	↑
Portugal	0 ²¹	1990	2 ¹¹	2003	↑
Total EUROPE	1212-1245		1.456-1.489		

¹Stoynov, Emilian, pers. comm.

²Hristo Hristov, pers. comm.

³T. Skartsi *et al.* 2003

⁴Osipova *et al.* 2003

⁵Ghasabian, M., 2002: *in litt.* to BirdLife International

⁶Sultanov E., 2002: *in litt.* to BirdLife International

⁷Galushin, V. & A. Abuladze, 1998

⁸Gavashelishvili, pers. comm.

⁹Michel Terrasse, pers. comm.

¹⁰Sánchez, J.J. (in press)

¹¹Infante, S., pers. comm.

¹²Moseykin, V., 2004: *in litt.* to BVCF

¹³Grubac 1998b

¹⁴Marin *et al.* 1998

¹⁵Spyropoulou 1998

¹⁶Appak (1992) in Galushin & Abuladze 1998

¹⁷Galushin & Abuladze 1998

¹⁸Abuladze 1994

¹⁹Terrasse & Bagnolini 1998

²⁰Sánchez 1998

²¹Cabral *et al.* (1990) in Heredia (1996)

²²the apparently increasing trend is not a real increase of breeding pairs, but due to different results from different authors (Gavashelishvili pers comm.).

POPULATION DEVELOPMENT IN SPAIN

The drastic decline of the Black Vulture had already been detected in the 1960s, when the first studies on the distribution, status and biology were made in Spain (Bernis 1966; Suetens & Groenendael 1966; Valverde 1966; Garzón 1968). In 1973 the first national census estimated 190 breeding pairs in 15 breeding areas (Hiraldo 1974; Garzón 1974). In 1986 the second national census showed an increase to 365 pairs in 17 colonies (Gonzalez *et al.* 1986). The increase was, to a certain extent, due to a better knowledge of the distribution of the colonies. In 1989 the third national census took place (Gonzalez 1990) and the population was estimated at 774 pairs in 27 colonies. The reoccupation of formerly deserted colonies was noticeable. In 1993 a national census, conducted as local censuses by the Autonomous Communities, revealed 1,027 pairs in 33 colonies (Sánchez 1998). In 2000 the Spanish population numbered 1,301 pairs, and in 2001 1,334 pairs (Sánchez in press), while the number of colonies and small breeding nuclei were 42 and 43 respectively (J. J. Sánchez pers. comm.).

Table 2: Evolution of the Black Vulture population in Spain

<i>Year</i>	<i>Nr. Breeding pairs</i>	<i>Nr. colonies</i>
1974	190	15
1986	365	17
1989	774	27
1993	1027	33
2000	1301	42
2001	1334	43

This spectacular recovery of the species in Spain was made possible through the implementation of a number of conservation measures, including legal protection from 1966 onwards, prohibition of the use of poisons, penalties for hunting protected species, habitat protection, education and information campaigns, the recovery of middens (“muladares”) and the establishment of feeding places (Sánchez in press). The vulture feeding stations were mainly to prevent vultures from being poisoned.

Island of Mallorca

The last island population of the species is located on Mallorca, since the other island populations became extinct: Sardinia in 1982 (H. Schenk pers. comm.), Sicily (Glutz von Blotzheim *et al.* 1971) and Cyprus (Cramp & Simmons 1980). On Mallorca, the species was on the verge of extinction in the 1970s (Mayol 1975), when less than 20 birds remained and only one pair was breeding, albeit irregularly. With such measures as education, restocking, nest guarding and the maintenance of feeding places, the population recovered and in 1991, more than 50 birds were counted (Tewes & Mayol 1993). Restocking with 35 birds started in 1984 and ended in 1992 (Tewes 1994) Since then, the population has continued to increase, and in 2002 there were 91 +/- 15 birds (Tewes 2003a, 2003b). The number of breeding pairs has increased to 10 or 11 (Tewes *et al.* 2002).

PRESENT THREATS

The increased illegal use of poison in the natural environment since the 1990s is affecting the Black Vulture, as with most other carrion feeders, in the whole northern Mediterranean area (Sánchez & Roig 2001). In Spain, poison was proven to have been responsible for 466 Black Vulture deaths from 1990 to 2003 (Hernandez 2003). In some colonies the population trend is negative due to the loss of reproductive adults through poisoning (Sánchez, in press). A potential threat is the decrease in food resources as a result of a decline in the rabbit population as a consequence of Myxomatosis and Viral Hemorrhagic Disease (VHD), and the strict prohibitions or, in some places, regulations governing the presence of livestock carcasses in the field because of the so-called 'mad cow' disease BSE (Bovine Spongiform Encephalopathy) (Sánchez in press; Camiña 2001).

In south-eastern Europe, the threats and the conservation situation vary greatly from one country to another (Tewes *et al.* this volume). In Greece, particularly, the illegal use of poison is the main threat to the declining vulture population (Spyropoulou 1998; Bourdakis 2003). In the Balkans, there is also a lack of food availability, habitat destruction and direct persecution that hinder the natural recovery of the Black Vulture and make restocking or reintroduction a delicate future endeavour (Tewes *et al.* this volume).

CONSERVATION

The Black Vulture is included in Annex I of the European Union Bird Directive and in Appendix II of the Bern, Bonn and CITES Conventions. It is classified as Vulnerable at European level (Tucker & Heath 1994) and Near-threatened at world level (Collar *et al.* 1994).

The conservation results achieved for the species in Spain show its capacity to respond to integral species and habitat protection. The conservation experience of Spain and western Europe in general is now being applied to the eastern part of the European Population.

The Black Vulture Conservation Foundation (BVCF) has been working since 1986 to re-establish a continuous Black Vulture population in its former European distribution area, by connecting the separate populations of Spain in the west and the Balkans in the east. Conservation of existing colonies is supported, and re-stocking or reintroduction is carried out where the threats leading to the earlier decline no longer exist (Tewes 1998). BVCF conservation efforts include a captive breeding project, restocking and conservation of the nearly extinct population in Mallorca, reintroduction in France, and an Action Plan for the Recovery and Conservation of Vultures on the Balkan Peninsula and Adjacent Regions. Activities by more and more local and international organisations, and an increase in co-operation, are also contributing to the recovery of the species in Eastern Europe (Tewes *et al.* this volume).

Conservation actions at European level have also been proposed in the "Action Plan for the Cinereous Vulture" of BirdLife (Heredia 1996) and its revision (Gallo Orsi 2001), which are being taken into account in the design of the above-mentioned Balkan Vulture Action Plan.

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