

## THE GRIFFON VULTURE IN YUGOSLAVIA

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### ABSTRACT

The Griffon Vulture breeding population in Yugoslavia is estimated at 190 pairs, although only 85 active nests are known. The breeding range has shrunk considerably in recent decades, and the main cause of the population decline is probably food shortage.

### INTRODUCTION

It is certain that the European population of the Griffon Vulture (*Gyps f. fulvus*) is decreasing. Only in Spain, Greece and Yugoslavia is this species found in any numbers. In Yugoslavia it is protected by law.

The Griffon Vulture was not, until recently, subjected to a detailed study of its distribution, abundance and biology. Relevant data exist only from certain restricted localities in ornithological studies or brief reports. On the basis of such fragmentary information, it was difficult to reconstruct its life history and distribution. Certain colonies suffered extinction even before they were fully described.

The Griffon Vulture had a wider distribution in Yugoslavia in the nineteenth and first half of the twentieth centuries than today. Rudolf von Österreich *et al.* (1878) reported breeding on the Panonian plains and Mt Fruška Gora, in abandoned tree-nests of the Black Vulture (*Aegypius monachus*). Lintia (1907) reported an unsuccessful nesting attempt on Deliblato Sands, and Matvejev (1950) reported nests at the Iron Gate (Danube Gorge), where it breeds no longer (Ham 1980).

The shrinking of its breeding range in a number of regions was supported by other data. For example, for Serbia Matvejev (1963) compared a record of 48 vultures on 903 field transect trips in 1938–54 with none on 227 field transect trips in 1955–62. The species was formerly described as a not uncommon resident (six colonies) in Montenegro (Reiser & Führer 1896); and, although infrequently, nests were also found along the Dalmatian coast in the middle of this century (Krapan 1980; Tutman 1952).

Certain difficulties obstructed attempts to establish a clearer picture of the trend:

- Cliffs on which vultures were sighted were often described as breeding sites without any nest having been located.
- On given breeding sites *all* nests were counted instead of only the active ones. Griffon Vultures frequently abandon old nests and build new ones, thus misleading a superficial observer as to the true size of the colony.

- Imprecise geographical records prevented certain localities from ever being traced. In addition, one breeding site was recorded under three different names (of a river, a mountain and a town) and was subsequently interpreted as three different sites.

The above problems resulted from a poor knowledge of the bird's biology and the relevant geography. The usual breeding sites are gorges and cliffs from 20m to 2000m above sea level (Kvarner Islands and mountains in Macedonia respectively).

## METHODS

Investigations were made from 1980 to 1982. Breeding sites recorded in the literature were checked, and active nests were kept under observation. Determination of activity was based on the presence (or absence) of eggs or young. A full census of active nests was attempted, supplemented by the calculation of probable nests based on the number of adult birds observed in the air or feeding at any one time (inaccessible terrain prevented a complete census).

## RESULTS

On our data, we can give an approximate picture of the distribution and abundance of Griffon Vulture nests on Mt Velebit and on the Kvarner island group. The latter are the northernmost colonies of the species in the Western Palearctic. Colonies A<sub>1</sub> and A<sub>2</sub> (Table 1, Figure 1) are on the same island; colonies A<sub>3</sub> and A<sub>4</sub> on another. Colonies A<sub>5</sub>–A<sub>8</sub> are dispersed throughout the island group. Colonies A<sub>9</sub> and A<sub>10</sub> are on Mt Velebit. At these sites a total of 43 nests was counted, with 62 breeding pairs estimated.

In Serbia, the Griffon once nested in several colonies, of which only three are still active (B<sub>1</sub>, B<sub>8</sub> and B<sub>9</sub>). Colonies B<sub>1</sub> and B<sub>2</sub> are by the Drina river (West Serbia). It seems that in Central and Eastern Serbia no active colonies remain (B<sub>4</sub>–B<sub>7</sub> were earlier reported active). In southwest Serbia the two active colonies are B<sub>8</sub> in the Sandžak region and B<sub>9</sub> in the Kosovo region. Fragmentary data from 1982 suggest 8 active nests, with an estimate of 32 breeding pairs for the whole of Serbia.

In Herzegovina four active colonies are known: C<sub>1</sub>–C<sub>3</sub> by the Neretva river (with C<sub>4</sub> extinct), and C<sub>5</sub> on the Montenegrin border (not recently studied). Nine active nests were recorded, with an estimate of 20 breeding pairs.

In Macedonia five colonies are listed sequentially (D<sub>1</sub>–D<sub>5</sub>) on a transect from Kosovo across Skoplje (town) and the Vardar river to the south of Macedonia. Twenty-five active nests were recorded, with an estimate of 75 pairs.

In Montenegro the Griffon Vulture was frequently seen in the past (Reiser & Führer 1896) and six colonies were recorded. There are only a few indications that it may still breed today in some part of northern Montenegro.

## DISCUSSION

The shrinking breeding range, decline in numbers, and retreat from certain regions of Yugoslavia can be attributed to several causes:

**Food shortage.** The number of wild animals which vultures could use as food is continually decreasing. To rehabilitate the vultures to feeding on cattle carcasses

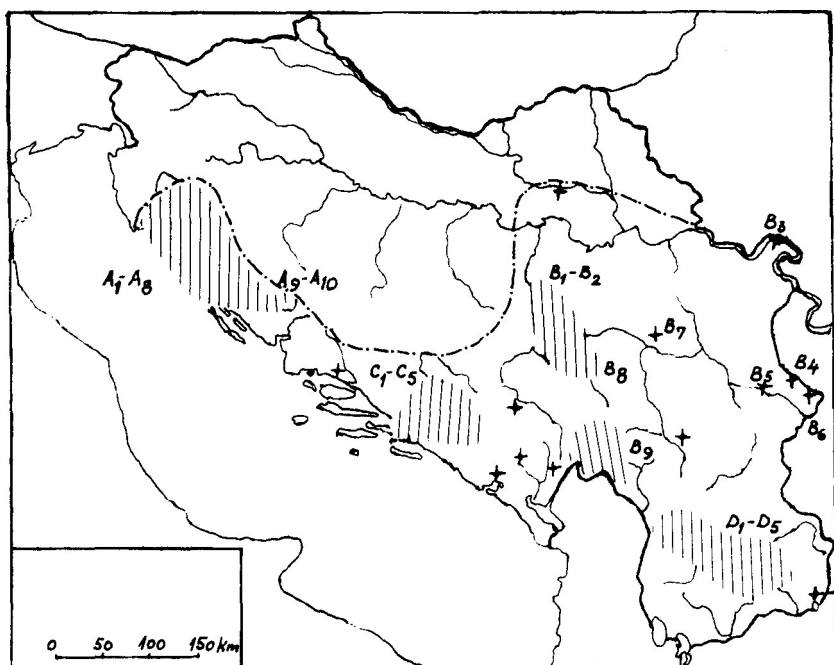
Table 1: Estimated vulture populations in different regions

Region	Place of nesting	Previously known literature	Number of nests			Estimated
			Counted			
			1980	1981	1982	
CROATIA	A <sub>1</sub>	+	15	13	11	13
	A <sub>2</sub>	—	6	4	7	11
	A <sub>3</sub>	+	?	4	6	6
	A <sub>4</sub>	+	?	?	6	6
	A <sub>5</sub>	+	?	12	13	13
	A <sub>6</sub>	+	0	0	0	0
	A <sub>7</sub>	+	?	?	?	2
	A <sub>8</sub>	+	?	?	?	1
	A <sub>9</sub>	+	?	?	?	5
	A <sub>10</sub>	+	?	?	?	5
	Σ		21	33	43	62
SERBIA	B <sub>1</sub>	—	7	?	7	7
	B <sub>2</sub>	+	0	0	0	0
	B <sub>3</sub>	+	0	0	0	0
	B <sub>4</sub>	+	0	0	0	0
	B <sub>5</sub>	+	0	0	0	0
	B <sub>6</sub>	+	0	0	0	0
	B <sub>7</sub>	+	0	0	0	0
	B <sub>8</sub>	+	?	?	1	20
	B <sub>9</sub>	+	?	?	?	5
	Σ		7	?	8	32
HERZEGOVINA	C <sub>1</sub>	+	5	4	4	8
	C <sub>2</sub>	—	?	?	4	4
	C <sub>3</sub>	+	?	2	1	3
	C <sub>4</sub>	+	0	0	0	0
	C <sub>5</sub>	+	?	?	?	5
		Σ		5	6	9
MACEDONIA	D <sub>1</sub>	—	5	?	3	10
	D <sub>2</sub>	+	?	?	?	10
	D <sub>3</sub>	+	1	2	3	10
	D <sub>4</sub>	+	19	19	19	30
	D <sub>5</sub>	+	?	?	?	15
		Σ		25	21	25

would be unproductive, due to the shift from extensive to intensive farming and the application of strict veterinary measures (burial of dead cattle, etc.).

**Poisoning.** The mass poisoning of wolves with strychnine in the 1950s and 1960s was a major factor in reducing the numbers of Griffon Vultures. Whole colonies were exterminated in this way. *Poisoning has recently been forbidden by law, but is still practised illegally at times.*

**Poaching.** Besides the food shortage, which remains a prime factor in the decline of the Griffon Vulture, another important cause has emerged in the past ten years. Organized gangs of poachers, usually foreigners and mostly from the Federal Republic of Germany, present a serious threat to the vulture colonies. Their object is the egg trade, whilst juvenile and adult birds are taken alive or killed and sold to zoos and collectors.



### JUGOSLAVIJA *GYP S FULVUS*

--- former range  
 + former colonies  
 // present range

Fig. 1: Past and present distribution of *Gyps fulvus* in Yugoslavia.

The increase in poaching activities roughly coincided with the ban on wolf poisoning, and the present inland distribution of the Griffon Vulture coincides with predominantly extensive cattle-farming regions. Protection by law is mostly formal, but in recent years more active steps have been taken. The first regular feeding place for the Griffon Vulture was established on the Kvarner Islands in 1982 with the help of the World Wildlife Fund, the Republic Institute for the Protection of Nature, Croatia, and the Institute of Ornithology, Zagreb. Two more permanent feeding places are planned.

### CONCLUSIONS

1. The extent of the Griffon Vulture's breeding range has shrunk by approximately 200km in East and Central Serbia.
2. Elsewhere in Yugoslavia the present range is considerably smaller than formerly.
3. Today the Griffon Vulture is mainly endangered by shortage of food, as well as by nest robbers.

4. Altogether, 85 active nests are known and the total breeding population is estimated at 190 pairs.
5. Protection by law is mostly formal, but in recent years more positive steps have been taken and the first regular feeding place was opened on the Kvarner Islands in 1982.

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